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PREVENTIVE MEDICINE IN THE CITY OF NEW YORK.¹

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THE conditions under which sanitary work is carried on in the United States differ considerably from those under which the sanitary authorities work in Great Britain. For instance, in the United States there is no national Board of Health, each state having its own Health Board and sanitary laws. It necessarily follows that throughout the United States there is no uniformity in regulations and methods. No definite statement can be made as to the condition of preventive medicine generally in America; but speaking broadly, in the rural districts and in the smaller towns, the sanitary methods are crude, while in many of the large cities, there is an enlightened and progressive policy to be found, equal to that in any of the great cities of the world.

The Health Department of New York City is an entirely independent sanitary organization, not being subject even to the jurisdiction of the State Board of Health. The jurisdiction of the board extends over the whole city, containing at present about 2,000,000 population, and in 1898 a similar board, increased to five members, will have jurisdiction over Greater New York, with a population of 3,250,000.

Ordinarily the duties of sanitary authorities relating to the infectious diseases are regarded as limited to the inspection of reported cases of only a few of the infectious diseases, their removal to hospitals when required, and the subsequent disinfection of the premises. In New York City *all matters connected with the scientific investigation, diagnosis, care, or sanitary supervision, in every way, of the infectious diseases are regarded by the Board of Health as properly coming within its province.*

The first important departure in New York City from the older methods was made in 1892 by the establishment of a bacteriologic laboratory, this being the first bacteriologic laboratory ever established

under municipal control. Originally designed to afford facilities for the diagnosis of Asiatic cholera, and for the investigation of questions relating to disinfection, the scope of its work was soon extended to include the bacteriologic diagnosis of diphtheria. The investigations of the New York City Health Department relating to diphtheria laid the foundation of municipal bacteriologic laboratories, and made them necessary to the proper conduct of sanitary work. In October, 1894, investigations in connection with the production of diphtheria antitoxin were begun, and in December of that year a special annual appropriation (antitoxin fund) of \$30,500 was made by the city authorities for the prosecution of this work. On January 1, 1895, the Health Department commenced the use of the antitoxin produced in its own laboratories. The special antitoxin fund made possible the establishment of a research bacteriologic laboratory devoted to the production of diphtheria antitoxin and other bacteriologic products, and to general experimental investigations in relation to the infectious diseases. In 1896 arrangements were completed for placing at the command of the physicians of New York City Widal's test for the diagnosis of typhoid fever; and recently arrangements have also been made for the administration of Pasteur's treatment for the prevention of rabies. A special laboratory and stable are devoted to the production of bovine vaccine virus, and this is freely distributed and vaccination is performed, free of charge, by the medical officers of the department.

The following statistical statement of some of the routine work performed in the laboratories of the Health Department gives a better idea perhaps of the extent of the work: During the year 1896, 25,049 cultures were examined for diphtheria bacilli; 1856 specimens of sputum from cases of suspected tuberculosis were examined for tubercle bacilli; 16,796 vials of diphtheria antitoxin were issued, and 918 patients with diphtheria were treated in their homes by the medical *attachés* of the laboratory, and 1214 persons were immunized.

Every case of contagious disease reported to the Department is inspected by the medical inspectors of the district in which it occurs, and, when necessary, such cases are removed to the Department hospitals. Disinfection is then performed, and is compulsory in every case, all infected materials being taken to the disinfection station for destruction or

¹Abstract of the address in Public Medicine, delivered before the British Medical Association at the Sixty-fifth Annual Meeting, Montreal, August 31 to September 3, 1897.

disinfection by steam. The work of inspection is carried on by a number of different corps of inspectors. These include the district medical inspectors, the district and special vaccinators, the inspectors for the administration of diphtheria antitoxin, the diagnosticians, the summer corps of inspectors, the medical inspectors of schools, etc. There are also a number of sanitary and food inspectors, who are not necessarily medical men, such as the inspectors of plumbing and ventilation, the sanitary police, the inspectors of offensive trades, the inspectors of meat, fish, milk, etc., and the inspectors of mercantile establishments, these last having under their charge the regulations as to the employment of women and children in such establishments. Besides these, there are veterinary inspectors, who have the supervision of the application of the tuberculin test for the diagnosis of tuberculosis in cattle and the diagnosis of other infectious diseases in cattle and horses.

The method of procedure in relation to diphtheria, given in detail, is as follows:

Knowledge of the existence of cases of diphtheria reaches the Department either by a direct report of the case by the attending physician or through the forwarding of a culture to the laboratory for bacteriologic examination when the case is of doubtful character. The cases are immediately referred to the medical inspectors of the district in which the case occurred. If the person lives in a tenement, lodging-, or boarding-house, or hotel, and a culture has not been previously made by the attending physician, the inspector makes, in each instance, a culture to confirm the diagnosis. The subsequent action of the Department depends upon the result of this culture. If diphtheria bacilli are found, the case is treated as one of diphtheria; if they are absent, the subsequent treatment depends on the special conditions existing. In every instance in which the case is proven to be diphtheria, at the end of ten days a secondary culture is made by the attending physician or the district medical inspector, to determine whether the diphtheria bacilli are still present in the throat, and subsequent cultures are made at short intervals until the examinations show that the organisms are no longer present. The case is then referred for disinfection, a detailed statement being left at the house by the medical inspector in charge, to guide the disinfectors as to the course which shall be followed.

Every case of diphtheria which comes to the knowledge of the Department is recorded according to the street and number in a card index, envelopes being used in place of cards. In each envelope, representing always one case, are placed all of the data relating to the first and subsequent cultures, and

results, and as each case is recorded it is at the same time platted on sectional maps of New York City drawn to scale, showing every house lot in the city. This platting is done by conventional signs, so that it is possible at a glance to determine the grouping and distribution of cases in different parts of the city, how many cases have occurred in any given house in the city during the last four years since this method has been in use, and when the cases occurred. It is also possible in a moment, by reference to the yearly card index, to find all the information in relation to each case which the Department possesses.

A special corps of inspectors is assigned to the administration of diphtheria antitoxin, and, on request, one of these inspectors will visit a person suffering from diphtheria in any part of the city, day or night, and administer diphtheria antitoxin under the supervision of the attending physician, and in cases where the patients are too poor to have an attending physician, supervise their removal to a hospital. These inspectors are also prepared, at the request of the attending physician, to perform intubation in laryngeal diphtheria. It is the usual course, where antitoxin is administered by an inspector, to immunize all members of the family who have been exposed to the disease. Diphtheria antitoxin has also been largely employed in institutions, especially for children, when diphtheria has appeared. This is the ordinary routine, and in every instance during the last two and a half years it has been possible to quickly stamp out diphtheria in institutions by this process of immunization.

Diphtheria antitoxin is administered by the inspectors free of charge, and is furnished on request free of charge to all public institutions, and may be obtained by physicians at more than one hundred pharmacies throughout the city, where it is on sale—free of charge, for administration to persons who are too poor to pay for the remedy, the only conditions in the latter case being that reports of the cases treated be forwarded to the Health Department on their completion.

The attitude assumed by the Health Department of New York City toward pulmonary tuberculosis, and the measures adopted for its prevention, constitute a most important feature of its work. The Health Board first began an educational campaign in relation to the causation and prevention of tuberculosis in 1889, and leaflets based on a communication on this subject presented to the Board by the writer and associate pathologists, giving the essential facts as to the nature of this disease, were widely distributed. No further action was taken at that time, as investigations showed that the medical profession

and the public were not then prepared for more extended measures. In 1894, attention having been again called to the subject by the writer, it was determined to institute at once more comprehensive measures for the prevention of this disease. The measures then adopted required notification of all cases of pulmonary tuberculosis occurring in public institutions, and requested reports of cases occurring in the practice of private physicians; they included also arrangements for the bacteriologic examination of sputum, to assist in the early diagnosis of this disease; the inspection of all reported cases in tenement-houses, lodging-houses, hotels and boarding-houses, and the instruction of the patients and their families as to the nature of the disease and the means to be taken for its prevention; the inspection of the premises in all instances where deaths were reported as due to tuberculosis, and the issuing of orders, when it was deemed necessary, upon the owners of apartments which had been occupied by consumptives and vacated by death or removal, requiring that such apartment be thoroughly renovated by painting, papering or kalsomining before they were again occupied by other persons; and the education of the public, by wider and more comprehensive methods, as to the nature of tuberculosis.

Under the resolutions by virtue of which these measures were enforced, 4166 cases of tuberculosis were reported in 1894; 5818 in 1895, and 8334 in 1896. All cases reported, so far as possible, except those in private houses, were visited, and the premises where the patients lived were inspected, and, in addition, the premises occupied by persons dying from tuberculosis (numbering each year nearly 6000) were inspected, and such action taken as was considered possible and desirable. Altogether the premises and cases thus coming under observation during these three years numbered more than 35,000.

In the beginning of 1897, on the recommendation of the writer and Dr. Prudden, the Health Board of New York City finally declared pulmonary tuberculosis to be "an infectious and communicable disease, dangerous to public health," and required "the notification of all cases occurring in the city," in the same way as is required of cases of smallpox, scarlet fever, diphtheria, etc. Tuberculosis, however, is not classed with the contagious diseases, but by a special section of the Sanitary Code, enacted to provide for these measures, is referred to as "an infectious and communicable disease."

At the present time there are no hospitals directly under the control of the Health Department for the isolation of cases of pulmonary tuberculosis, but it is hoped that such hospitals may be soon provided.

Persons suffering from pulmonary tuberculosis should not be treated in association with other classes of cases in the medical wards of general hospitals, and are often very properly excluded from such hospitals. Moreover, experience has shown that in institutions devoted solely to the care of consumptives the general welfare of the patients is more easily fostered, the risks of fresh infection more certainly diminished, and the chances for recovery more surely enhanced than in general hospitals. From the beginning of this work the officials of the Health Department have encountered, in the lack of proper facilities for the care of consumptives, a great obstacle to practical success, and the writer is convinced that the grave responsibilities which rest upon sanitary authorities generally in this matter cannot be properly discharged without the establishment, under their direct control, of additional hospitals for the care and treatment of this disease. No week passes in which the officers detailed to this work in New York do not meet with many instances in which the members of many households, numerous inmates of crowded tenement-houses, employees in dusty and unventilated workshops, and many others, are dangerously exposed to infection from victims of this disease, who cannot gain admittance to the overcrowded-public institutions, or who reject all proffered assistance and instruction, and, from ignorance, indifference, or inability through weakness due to the disease, scatter infectious material broadcast, and thus diminish their own chances for recovery and imperil the health and safety of others. In such cases sanitary suggestions are futile, and removal to a hospital constitutes the only effective action.

The Health Department of New York City, while feeling strongly that the most important source of infection is through the dried sputum of consumptives, has elaborated with great care methods for protecting the public, as far as is within its power, from infection by the meat and milk of tubercular animals. Since 1895 no milk has been allowed to be sold within the city without a permit from the Health Department, and before these permits are issued information must be furnished as to the source from which the milk is obtained, the number of animals, the character of the food-supply, and the sanitary conditions surrounding the dairy. There are also special regulations controlling the sale of milk, and the permits may be revoked if these regulations are not complied with. All milch cows in the city are subjected to the tuberculin test, and animals found to be diseased are killed. There also exists a careful inspection of animals slaughtered for food and of all meats sent into the city, and the carcasses of those found to be tubercular are destroyed.

Another amendment to the Sanitary Code which has recently been enacted, as the result of investigation by the Department showing that the dust of street-cars and various public places is often infectious, prohibits the spitting on the floors of cars, ferry-boats, etc., and requires that all companies post notices to this effect in the public conveyances.

Most beneficial effects have already resulted from the various measures instituted for the prevention of tuberculosis. Not only has there been a very material decline in the number of deaths occurring from this disease, but there has been a most gratifying increase of knowledge and intelligence among the poorest class of the population as to its nature. This increase of intelligence, and the precautions resulting from it, afford the greatest promise in the future of a persistent and still more rapid decline in the frightful mortality caused by the tubercular diseases.

The method employed for recording and platting cases of diphtheria has also been used for cases of tuberculosis. Transcripts from the maps on which are platted the cases of diphtheria and tuberculosis have been prepared, to show the distribution of those cases in certain wards of the city. Thus from an analysis of the distribution of reported cases and deaths from tuberculosis in Wards 4 and 6 of New York City, for the years 1894, 1895, 1896 to March, 1897, it appears that during this period only thirty-eight per cent. of the inhabited houses of these two wards were infected with this disease, and that fifty per cent. of the cases of tuberculosis occurred in twenty-three per cent. of the infected houses, these constituting only nine per cent. of all the dwelling-houses in the wards. The facts, as shown by a study of these maps, argue more forcibly for the infectious and communicable character of this disease than could any words.

Early in 1897, under the authority of a special resolution of the Board of Estimate, 150 medical school inspectors were appointed, and a system of medical school inspection was begun. During three months, sixty-five school days, in which this system has been in operation, there have been examined 63,812 children, and 4183 were excluded from school for the following diseases: Measles, diphtheria, scarlet fever, croup, whooping-cough, mumps, contagious eye diseases, parasitic diseases of the head and body, chicken-pox, and skin diseases. This system of school inspection has thus far given most satisfactory results and promises still more for the future.

The educational work of the Health Department constitutes a very important feature of its usefulness. It has been the custom of the Department for some years past to issue from time to time circulars of in-

formation on various topics, and especially those connected with infectious diseases—their diagnosis, treatment, or management. Some of these circulars are popular in character, very large editions being published, 50,000 or more at a time, and are designed for general distribution, particularly among the tenement-house population. These circulars are published by the various medical journals and by the daily papers in New York City, and thus gain a very wide circulation. They are also sent by mail or delivered by messenger to the physicians of the city. Aside from the circulars described, numerous scientific bulletins have been issued from the bacteriologic laboratories, detailing the results of original investigations in connection with infectious diseases, and these bulletins are widely distributed among the profession of New York City. The importance of this educational work cannot be overestimated. Its value is incalculable in disseminating popular and scientific information in regard to the results of the latest studies in infectious diseases, and there have been constantly exhibited in New York the most gratifying indications of the influence of the information thus distributed, on both the general public and the medical profession. More than this, the circulars keep constantly before the medical profession and the laity the work, the duties, and the functions of the Health Department, as related to the people and the profession. The criticism has often been made, particularly in Europe, and in the earlier work of the New York City Health Department, that the methods proposed were impracticable. The results have shown that they are not impracticable. What has been described is not something that it is proposed to do, but it is a statement of what has been done, and the work, as briefly outlined in some of its phases, is to be considered as only introductory. It is the purpose of the Health Board to establish a supervision of all infectious diseases along the lines which have been thus far developed, in relation to tuberculosis and diphtheria, as rapidly as the scientific knowledge at command will make such a course possible.

The final test of the efficiency of any scheme of sanitary control and of the healthfulness of any locality is found in the mortality statistics, considered in relation to the causes of disease and death. Various factors and conditions, however, may influence these, such as density of population, nationality of the inhabitants, and physical conformation of the country. The conditions in New York City are in many respects very unfavorable. The average density of population of the larger part of New York, that is on Manhattan Island, is greater than that of any other great city of the world. Sanitary District A

of Ward 11, New York City, has a population of more than 800 to the acre; Ward 10, over 640 to the acre; Ward 13, 540; Ward 17, 430. The only localities approaching these wards in density of population is a small area in Paris, where the population is 430 to the acre; one district in Prague with 485 to the acre, and the Whitechapel district in London, which has a population of about 300 to the acre in Spitalfields, Mile End, and Newtown, and 365 in Bethnal Green. The density and cosmopolitan character of the population of New York also renders the sanitary problems presented extremely difficult of solution. Then, too, the physical conformation of Manhattan Island, which is long and very narrow, produces overcrowding, fully three-fourths of the population living in tenement-houses, which are five, six, or more stories high, and contain from two to four or more families on each floor.

These facts should be kept in mind in considering the mortality statistics of New York, as compared with those of the large cities of Great Britain and the Continent. With them before us, the diminution in the death-rates, and the present death-rate, are most significant.

A comparison of the mean death-rate for decennial periods in New York City since 1834 shows that there was an increase during the first three periods ending in 1863, and that since that date there has been a continuous and very heavy decline in the rate, especially marked in the most recent years. The mortality in New York arose to such a point that the inhabitants became alarmed, and in 1866 the Health Department as now constituted was organized. In the decennial period ending in 1843 the mean death-rate was 28.03; for the period ending 1853 it rose to 33.81; the next period, ending in 1863, it was 33.94. Since that time it has declined to 31.11 for the decennial period ending in 1873; to 26.87 for the period ending in 1883; to 25.78 for the period ending in 1893, while in the year 1894 it was 22.76; in 1895, 23.10; in 1896, 21.54, and for the first half of 1897, 19.60. The population meanwhile has increased from 312,000 in 1840 to an estimated population of 1,990,000 on July 1, 1897. The mortality-rate is normally higher for the first half of the year than the second half, and it is, therefore, probable that the rate for 1897 will be a fraction over 19, or a diminution of twenty-five per cent. on the death-rate for the decennial period ending in 1893.

The search for the causes of diminished mortality from all causes shows that the largest reduction has been in the zymotic death-rate, including diarrheal diseases of children under five years, and there has been also a steady and important decline in the

tubercular death-rate since 1886. Investigation further shows that a special reduction in the mortality from diphtheria and croup, amounting to nearly forty per cent., has occurred since the introduction of diphtheria antitoxin with the beginning of 1895. This reduction has taken place in spite of an increase in the number of reported cases of this disease. Up to the beginning of 1895 there had been a steady increase for some years in the mortality from diphtheria and croup, and for the year 1894 the death-rate was higher than that from any other single disease, excepting tuberculosis and pneumonia—pneumonia really including a number of different affections. The combined death-rate from measles, scarlet fever, diphtheria, croup, smallpox, and typhoid fever has been reduced exactly one-half within ten years, the rate for 1896 for these diseases being 1.64 per 1000 population, as contrasted with 3.26 for 1887; for 1897 it will apparently be still lower.

The government of the United States is democratic, but the sanitary measures adopted are sometimes autocratic, and the functions performed by sanitary authorities paternal in character. We are prepared, when necessary, to introduce and enforce, and the people are ready to accept, measures which might seem radical and arbitrary, if they were not plainly designed for the public good, and evidently beneficent in their effects. Even among the most ignorant of our foreign-born population few or no indications of opposition or resentment are exhibited to the exercise of arbitrary power in sanitary matters. The public press will approve, the people are prepared to support and the courts sustain, any intelligent procedures which are evidently directed to the preservation of the public health. The belief is never aroused in any class of the population, however ignorant, that the institution or enforcement of any sanitary measure is primarily designed for the restriction of the individual freedom. There is nowhere to be found any jealousy or distrust of law or government, as such. It is therefore possible to adopt measures more arbitrary in many respects than could be adopted in most other countries, simply because our government is democratic. This gives the keynote to the attitude of the sanitary authorities of New York.

It may be truly said that there is no great city in the world to-day which, in the broad sense, is cleaner and healthier than New York. By clean is meant the purity of the atmosphere, the cleanliness of the streets, the abundance and purity of the water-supply, and the efficiency of the sewerage system. No city is healthier, considering all the sanitary factors in the situation, such as the size and density of population, the varied nationality of the inhab-

itants, the character of the climate, etc. Nowhere can there be found a fuller recognition than in the United States of England's high standard of excellence in public medicine, or a more sincere appreciation of her vast contributions to the progress of sanitary science. But she must look well to her laurels if her cities are to be kept cleaner than the great cities of the United States, or her urban population is to be healthier and happier than the same class on this side of the Atlantic.

THE TREATMENT OF CONVERGENT STRABISMUS IN CHILDREN.¹

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In general, our definite knowledge of a medical subject is inversely as the contributions to its elucidation. This, unfortunately, applies to strabismus, for despite the thought and patient observation which have been devoted to this matter, it is still true, as has been said by Dr. Chas. Stedman Bull, that "the whole subject of strabismus is the least understood by modern ophthalmologists in the whole domain of ophthalmic science." I hasten, therefore, to assure you that I shall not still further obscure the subject by the statement of theories or by the discussion of the mooted points, but shall simply outline the method of treatment which experience has demonstrated to be most effectual in these cases. The discussion will not include paralytic conditions in which the power of excursion of an eye in certain directions is diminished or abolished through paralysis of an ocular muscle. I will concern myself only with concomitant strabismus. Here the associated movements of the eyes are performed with little or no limitation of motion, but the observed object is fixed with one eye only, the other maintaining in all directions a relative position of too great convergence.

The association of convergent strabismus with hypermetropia was pointed out and explained by Donders, who demonstrated the normal relations of convergence and accommodation, showing that for a certain position of convergence we naturally put forth a corresponding accommodative effort, and that in hypermetropia a correction of the optical defect is obtained by an effort of accommodation proportionately greater than that made by a normal eye, and in excess of the convergent effort required for the same distance. Hence, a hypermetropic subject must learn either to dissociate the two functions or to sacrifice either distinctness of vision or binocular single vision. Should one eye chance through op-

tical defect or disease to have much poorer vision than its fellow, the choice is easily made, and strabismus results, diplopia being avoided by mental suppression of the image of the more defective eye. While this theory fails to explain all the cases of strabismus, and while we find instances in which hypermetropic eyes with markedly unequal vision do not squint, it may, for our present purpose, be assumed as sufficient, especially as the treatment which it suggests is attended by a gratifying measure of success.

In some few cases strabismus develops very early in life and binocular fixation is never acquired, but as a rule it is first seen when the child begins to observe its surroundings in a manner requiring more prolonged and accurate fixation, that is, during the third or fourth year. It is sometimes alternating, either eye fixing indifferently, and usually is periodic, being at first only momentarily present, when the child is tired or excited, and reappearing more and more frequently, and finally becoming permanent in one eye. At the first appearance of the squint the advice of the family physician is often sought, and this is my excuse for bringing the subject before you. It is sometimes urged that popular opinions on medical subjects are the result of observations of generations of the laity, and have a sound basis of fact somewhere; but for the very general belief that squint, if left to itself, will be relieved spontaneously, there is small foundation, and I think that the structure of expectation is built largely on the dread of the surgeon's knife.

I will not deny that squint sometimes does disappear of itself, but the correction is more often cosmetic than actual; the eyes have straightened sufficiently to relieve the deformity, yet binocular single vision is not established, and in these cases the patient often experiences more annoyance than in others in which the deformity is more noticeable. I therefore strongly advise against leaving these cases to themselves on the chance of improvement, and will briefly point out the lines of treatment most likely to relieve the condition.

The non-operative treatment of strabismus may be summarized as relieving accommodative strain. No one rule can be given for the accomplishment of this result, and each case will present its own peculiar requirements; the treatment, therefore, must be modified by expediency. Children differ so widely in their mental development and tractability that no arbitrary age can be fixed, but as to treatment, I will divide the cases into two general classes as to when they can or cannot be given glasses.

In the first class there are certain patients who from birth or shortly after have shown a permanent

¹ Read at the Thirteenth Annual Meeting of the Fifth District Branch of the New York State Medical Association, held at Brooklyn, May 25, 1897.

squint of marked degree. (This must not be confounded with the wandering of the eyes of young infants before binocular fixation has been acquired.) Such cases are proper ones for early operation, as they are likely to prove troublesome at best, and it is important, if possible, to give the eyes a correct position during the development of the visual apparatus, thus enabling the patient to learn to use them properly. Delay in remedying the deformity often permits an eccentric portion of one retina to become functionally connected with the macula of the straight eye (the so-called second macula), which, when the squint is corrected later on, gives double vision in the proper position, and adds to the difficulty of effecting a cure.

A word may be said here as to the amblyopia of squinting eyes. In many cases of strabismus the visual acuity of the squinting eye is found to be much lower than that of its fellow. In some cases the reason is apparent in an opacity of the cornea or lens, in some intra-ocular disease, or in an error of refraction; in others there is no discoverable abnormality. On careful examination these eyes will show frequently a blind spot (central scotoma) at the macula, sometimes only for color, and often very small and difficult to detect. Two explanations have been offered of this condition: One, that the eye deteriorates through non-use, as the psychical suppression of the macular image is habitual (amblyopia exanopsia), the other that the defect is primary and the cause of the squint.

It probably is true that the habitual suppression of the image of one eye during the period of development does prevent its acquiring full visual acuity, and amblyopic eyes frequently do improve greatly in vision under a correcting glass, proper position, and exercise. It is also undoubtedly true that in many instances some anatomic defect is present, due, possibly to a small macular hemorrhage at birth or to some other cause which we cannot detect by means of the ophthalmoscope. In such cases no amount of use will develop perfect vision. While we cannot educate away structural defects, even these eyes will occasionally improve somewhat with use, and if the fellow eye has normal vision the patient will suffer no apparent inconvenience. Another reason for the early correction of the deformity is the unfortunate influence it exerts on the mental growth of the child. The consciousness of being different, and the heartless criticism of its playmates, tend much to the development of self-consciousness, and entails a great amount of needless suffering on a sensitive nature.

While operation is indicated in the above-mentioned cases, I do not advise it, as a general rule, until I am satisfied that a cure cannot be obtained by

hygienic measures. For very young children (those two or three years of age) who are just developing squint, very careful supervision is necessary. It should be impressed upon their parents that the eyes should have as little near work as possible, and they should be made to understand that this excludes other things than books and pictures. It is astounding, when one looks into the matter, that so little harm results from the toys which are ordinarily given to children. Many of the common toys found in the shops require as accurate vision in their use as the reading of very fine type, and it is the least robust children who most enjoy such toys. The sound, hearty child cannot, from the very excess of its animal spirits, stick to any one thing long enough to do itself much harm. We must exclude from the nursery, then, all picture-books, blocks, segmented toys, kindergarten games, sewing, and whatever requires vision at short range, substituting large toys and, above all else, out-of-door exercise, as much country as possible, with its opportunities for exercising vision at long range, and its restful tones of color.

Careful attention to the bodily health is indispensable. When, under such a regimen, the squint persists, it is well to bandage the fixing eye for a time each day and to compel the child to use the squinting eye, if there be vision enough to enable it to move about. To this may be added the occasional use of atropin, either in both eyes, or in the better eye alone, to force the squinting eye into use. In this way we can carry these children along to an age when glasses can be worn. In many cases this is surprisingly early, sometimes before the third year.

With the second class of children—those who can wear glasses—the first step is to put them under atropin. The result is often marked and immediate, and we can form a fairly accurate idea of the outcome of treatment by the behavior of the eyes under the influence of the drug. When the squint is at once corrected by it, it is safe to predict a cure by the use of glasses. When there is little or no improvement, or when the squint is increased, the cure will be less prompt; but even in these cases, if the parents can be induced to persevere, it may be effected. A year or more may be required, and the effort may for a long time seem to be entirely unavailing. Improvement will be usually manifested at first by an occasional return to a correct position, which will be more and more frequently attained. Sometimes this is quite rapid when once begun.

An accurate measurement of the eyes of young children for glasses is difficult, but by the ophthalmometer of Javal and the ophthalmoscope we can obtain fairly satisfactory results, which can be improved from time to time as the child grows older.

Glasses are usually readily accepted by children, for the relief of the accommodative strain is appreciated by them and they will tolerate quite full corrections.

If the squint is not relieved by the use of atropin and glasses, exclusion of the fixing eye should be practised, and atropin may also be used at intervals if it produces a good result. Systematic exercise with the stereoscope is of great advantage, and the pictures adapted to the use of children are valuable. Attention to the general physical welfare of course is all-important, and a careful regulation of the kind and amount of near work should be observed. This does not mean that these children should be kept from school, but that they should be permitted to do their work under proper conditions. In our private schools these matters already have received much attention, and I believe that the conditions of light, ventilation, etc., are generally excellent. In the public schools they are no doubt as good as they can be made with the means at the disposal of the authorities.

In our own homes there is a very great opportunity for improvement. How often do we find in our houses any provision for the comfort of the children during their study or reading? They must make the best shift they can with the arrangements provided for the adult members of the family. If we were compelled to habitually use chairs and tables suitable for a race twice our size, we would complain bitterly, but this is practically what we demand of our children. It is a simple matter to provide a higher chair or a lower table, for ordinary furniture may easily be adapted to their use. An adjustable rack for holding a book properly is not a great luxury, and any one of ordinary mechanic skill can easily improvise one. I need not urge the importance of these aids to correct posture; we need only put in evidence the drooped shoulders of almost every man we meet who has led a studious life to prove the contention that the matter is one deserving of careful attention.

Artificial light for reading should also be looked into. We frequently find on inquiry that a child is working by an exposed gas-jet, high over its head. Such a light is barbarous; it is insufficient and flickering, is in a bad position, and is little better than the tallow-dip of our fathers. A student-lamp is probably the best readily obtainable source of artificial light, as it fulfils fairly well all the requirements of color, brilliancy, and steadiness. It is shaded, and is low enough to prevent the bright image of the flame from striking directly on the retina.

I cannot here go more fully into these questions of general ocular hygiene; they are, in my judgment, very important matters, not only in squint cases, but

also in the prophylaxis of myopia. The effort of the physician should be to prevent rather than to cure disease, and when the laity, through a better understanding of physical processes, are able to grasp this truth, and will take the trouble to find out how properly to care for their eyes and the eyes of their children, our endeavors to ameliorate by surgical methods the results of neglect will no longer be necessary.

In the majority of cases of strabismus, the treatment thus indicated will, I am sure, prove successful, yet there are some in which, after a patient trial, we fail utterly to obtain a good result, or in which, for some reason peculiar to the case, we wish to avoid delay. In such, operation will be indicated. If possible, the operation should be performed under cocain anesthesia. With most children, however, this is impracticable, for though we can render the procedure painless, we cannot without force keep a young patient reasonably still, and therefore must resort to ether.

In operating, I always aim at an under-correction of the defect. The immediate result is not so brilliant, but the after-result is better. This is particularly true of children whose orbits are near together, for as the face develops and the orbits diverge, the consequent change in the relative position of the eyes may convert an immediately successful result into an over-correction. This danger, however, is reduced to a minimum by the modern operation of tenotomy. It is not unusual to find a disfiguring over-correction from the older operation of myotomy, but after a tenotomy this is rarely seen. A relative insufficiency, however, may result from a too free division of the interni. I will not discuss the technic of the operation, nor the relative advantages of tenotomy and advancement. Whatever the operative procedure is, the aim should be the establishment of binocular fixation, as well as removal of the deformity, and the patient should not be dismissed as cured until we can demonstrate by the use of the stereoscope that this object has been attained.

PRESSURE NEURITIS CAUSED DURING SURGICAL OPERATIONS.

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WITHIN the past two years my surgical colleagues have referred to me a number of cases of painful, localized paralysis, which first had been noticed immediately after recovery from anesthesia. As this totally unexpected sequel of operation has always been disheartening to the patient and annoying to

the surgeon I wish to call attention to the possibility of its occurrence, and to the necessity of taking certain simple precautions which will prevent it. In all the cases except two, the paralysis was in one arm. The following will serve as an example:

N. H., male, aged thirty-four years, general health good. Nine days before examination he was operated upon for varicocele, under ether. Immediately after recovering consciousness he discovered that his left arm was numb, heavy, and weak. Since then the arm has been useless, and a stinging numbness has been felt which delays his going to sleep at night, but only rarely is severe enough to wake him after he has once fallen asleep. All the joints of the arm can be moved, but only feebly and with difficulty. Movements of the shoulder and elbow are as weak as those of the wrist and fingers. Inability to raise the arm (paralysis of the deltoid) or to place it behind the trunk (paralysis of the latissimus dorsi) is especially annoying on account of the interference with the act of dressing. The faradic reactions are retained, and there is no wasting or other trophic symptoms.

Here, the whole brachial plexus was evidently damaged at the time of operation, and there can be no doubt that it was due to the arm having hung over the edge of the table so that the nerve trunks were subjected to pressure, probably for some time. In the other cases I have seen, the explanation of the condition has been the same. The recent introduction of narrow operating-tables, with sharp edges, and the scant covering for the table which is often deemed sufficient, seems to me to have greatly increased the liability of the occurrence of this accident; nevertheless, I have not seen this cause mentioned in the literature of neuritis.

In the foregoing case the prognosis is good. The absence of complete paralysis, severe pain, and change in the electric reactions makes it highly probable that in a few weeks the arm will have recovered. But not all cases of this kind are so favorable, although ultimate recovery is nearly always to be expected. A young woman who, after a comparatively trifling gynecologic operation, suffered in the same way, but who had severe pain, glossy edema, and some loss of faradic irritability, did not recover full use of her arm for several months.

The operating-table used at one of my operations had an edge which was raised above the general surface. The patient, a woman in poor general health, lay in such a position that the left knee rested on this edge. The external popliteal nerve undoubtedly was compressed against the fibula, for immediately after recovery from the anesthesia, she complained of the usual numb, stinging pain in the area comprised in the distribution of this nerve, and there was well-marked foot-drop. The anterior tibial and peroneal

groups of muscles wasted, lost faradic irritability, and gave the reaction of degeneration to the galvanic current. Ultimate recovery ensued, but at the end of two months, when the patient left Denver, it was still incomplete. In another case the pressure of Clover's crutch caused neuritis of the external popliteal, which fortunately subsided after a few weeks.

Little need be said of the means of preventing such unfortunate accidents when attention has been called to the possibility of their occurrence. The patient's arms should not be allowed to hang down, and care should be taken that during operation the weight of the body is as evenly distributed as possible. Keeping the patient in any constrained position should be avoided when not absolutely necessary, and the use of any mechanic contrivance for maintaining a desired position should be with due care to prevent nerves from being stretched or pressed upon. If neuritis does occur, the first indication is to secure absolute rest of the affected part during the early stage. At this time voluntary motion, massage, electricity, or any other excitant of muscle and nerve will do harm. When the pain and tenderness have subsided, counter-irritation, gentle rubbing, and the galvanic current may be used to advantage. The faradic current often is harmful, and is useless except as a means of diagnosis or as a counter-irritant applied to the skin.

CLINICAL MEMORANDA.

A CASE OF SARCOMA OF THE LUNG, WITH SYMPTOMS OF ADDISON'S DISEASE FROM INVOLVEMENT OF THE SUPRARENAL CAPSULES.¹

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CLINICAL REPORT BY DR. PACKARD.

THE case herewith reported is placed on record partly because of the rather infrequent occurrence of such massive malignant disease of the lung, partly because of the rarity of bronzing of the skin from carcinomatous and sarcomatous involvement of the suprarenal capsules. During life the diagnosis was made of primary malignant neoplasm of the lung, with secondary deposit in and destruction of the adrenals, and it was only after careful consideration of the pathologic conditions found at au-

¹ Read before the College of Physicians of Philadelphia, April 7, 1897.

topsy, and a histologic study that the word "primary" was omitted from our title.

The patient was a man, aged thirty-three years, who was admitted to the Philadelphia Hospital, July 1, 1896, suffering from cough and hemoptysis, which dated from December, 1895. He was a native of Holland, a day laborer by occupation.

When first seen in October, 1896, when I went on duty at the hospital, I was much impressed by his peculiar facies. His face expressed much suffering, his skin was of a peculiar sepia color, his mucous membranes were exceedingly pale, and his sclera of a remarkably blue color.

His father died at the age of fifty-three years of "dropsy;" his mother, three brothers, and a sister, are alive and well. All of his family are said to be of a dark color. He had the ordinary diseases of childhood, but was never seriously ill until the onset of his present trouble, and always considered himself a healthy man. He never used alcohol immoderately, never contracted venereal disease, and had received no injury.

His present illness dated from December 23, 1895, although he had had a hacking cough for some time before. On the date mentioned it was noticed by his landlady that there was some blood in his expectoration, although he himself had not noticed it at this or at any prior time. Soon after this he noticed pain in his right side, a new symptom in his trouble. These symptoms—cough, hemoptysis, and pain in the right side of the chest—had continued with increasing severity until the time of examination. In February, 1896, he began to have severe pain in the right leg, especially in the knee. This pain continued with great intensity until his death. Careful and repeated questioning failed to elicit any history of increasing darkness of skin, and the patient frequently declared that his skin always had been dark.

Early in October the following notes of his condition were made: "He is thin to emaciation. The attitude when sitting on a chair is constrained, the weight being thrown to the left side, the hands being held on the arms of the chair in order to overcome the jar produced by coughing. When in bed the decubitus is on the right side, with the right thigh and leg strongly flexed. The slightest movement of the trunk or right leg causes excruciating pain, so that without an anesthetic thorough examination of the right hip is impossible. The breathing is hurried, shallow, and frequently interrupted by a smothered cough. The radial pulse is equal on the two sides, rapid, and compressible. The face is drawn and sad, the skin of the face light olive or sepia in hue, the upper eyelids very dark. The mucous membrane of the mouth is very pallid and shows no area of pigmentation. The sclerae are very blue, the pupils equal and natural. The right side of the neck is decidedly fuller than the left, from the presence of two or more enlarged supraclavicular glands.

"The skin of the trunk is very dark. On the front of the chest on the right side are two darker areas, an inch and a half square, said to be the result of two blisters that were applied six weeks ago. The pigmentation in these areas is very decided, not being produced by

the hyperemia and pinkish discoloration ordinarily seen after the use of blisters, but of a dark-brown color. Over the right half of the thorax at the base there is a larger but rather less deeply pigmented square area which marks the site of a mustard plaster applied one or two weeks ago. (These areas remained of the same or possibly of a darker color until the time of the patient's death.) The areolae of the nipples are very dark, and there is a slight increase of pigmentation in the axillae.

"The thorax is long, the downward curve of the ribs being very marked. The costosternal angle is very acute. On both sides the clavicles stand out prominently, from sinking of the upper portion of the chest. The right side moves but little during respiration; the left shows rather exaggerated respiratory excursion. The heart is in the normal position; the area of cardiac dullness is unaltered from the normal, so far as can be determined, and the heart-sounds are clear and free from murmurs. Over the right chest anteriorly the percussion-note is absolutely flat, with great increase of resistance to the percussed finger. This flatness and increase in resistance is possibly more marked above the fourth rib than below that point. The dividing lines between the toneless note over the lung and that due to the heart and liver cannot be determined, although a slight difference in the pitch at the upper border of the seventh rib on the right perpendicular nipple line would seem to indicate the upper border of the hepatic area. The liver dullness extends downward to the costal margin. The percussion-note over the left lung anteriorly is exaggerated except immediately below the left clavicle, where it is impaired. The area of splenic dullness is normal. Over the right side anteriorly there is absolute silence on auscultation save in the infraclavicular region, where there is distinct cavernous breathing over a small area. Vocal resonance and tactile fremitus are absent, except over the area of cavernous breathing, where there is poorly developed bronchophony.

"Posteriorly the examination shows a decided deviation of the thoracic spine to the left, and marked pigmentation over the sacrum. The right lung posteriorly and in the axillary region is dull, almost to flatness, with great increase of resistance, showing absence of breath-sounds except near the root, where there is distinct bronchial breathing, with numerous moist râles. Over the left lung there is exaggerated resonance, with puerile breathing.

"The abdomen is scaphoid, but is otherwise negative, there being no marked increase of pigment beyond that of the whole surface of the body. No tumor-mass can be felt. The external genitals are very dark. Examination of the right knee shows merely slight fulness on each side of the patellar tendon, there being no floating of the patella, and, so far as can be determined, no abnormal range of movement. The right leg shows no other abnormality, but careful examination of the hip cannot be made without an anesthetic, owing to the great pain caused by the slightest manipulation."

The urine, save for a high specific gravity (1025) was normal. Examination of the eye-grounds was negative except for a high degree of choroidal pigmentation, possibly not excessive for a man with normally rather dark-

coloring and black hair. Laryngeal examination was entirely negative. Examination of the blood showed simple anemia with equal moderate reduction of the red cells and hemoglobin, and no leucocytosis.

The sputum was somewhat peculiar in that it was tough, apt to be expectorated in clumps, and was of a peculiar white color. It was on one or two occasions slightly streaked with blood, but at no time had the current-jelly appearance or grass-green color. No fragments of growth could be found in it, the only peculiar fact noted being that there was much amorphous, granular material, and detritus in addition to a small number of pus-corpuscles. (The examination of sections of the lung shows clearly why tumor-tissue could not be recognized in the broken-down granular material which probably composed the greater part of the expectoration.) Tubercle bacilli were never found during repeated examinations.

During the entire time of his hospital life the patient had a very irregular temperature, with constant evening exacerbations of from 1.5° to 2° F. It attained 102° F. in the evening on a few occasions, but the average evening temperature was $101\frac{3}{4}^{\circ}$ to $102\frac{3}{4}^{\circ}$ F. That of the morning was from $97\frac{3}{4}^{\circ}$ to $99\frac{3}{4}^{\circ}$ F. The pulse was uniformly rapid, being constantly above 105 to the minute.

The appetite was poor, the bowels usually regular, but at times moved too frequently. Some sweating at night was present at times, but it was not excessive, and it was not out of proportion to his debility.

The conditions noted above persisted until the time of his death, with the exception of the physical signs over the right lung. At each examination after that first made there was constantly absolute dulness, with complete silence over the whole right lung. The abnormal pigmentation noted in areas on the chest slowly but continuously became darker until death. About a week before death the feet and legs became swollen to a marked degree, the edema being soft and deeply pitting. During the last twenty-four hours of his life the breathing was of the Cheyne-Stokes' type. Immediately before death internal strabismus was present, but of which eye is not stated in the notes. Death occurred, apparently from asthenia, on November 13, 1896.

The diagnosis made during life was primary tumor of the right lung, with secondary involvement of the adrenals. The only other condition seriously considered was inflammatory thickening of the pleura from tuberculous infection, with concomitant fibrocaseous change in the adrenals. The negative result of the sputum, it was thought, might have resulted from loss of function of the right lung from compression by the thickened pleura and consequent absence of expectoration from the diseased lung; but further observation demonstrated that the amount of sputum was too great to be accounted for by the slight physical signs on the left side of the thorax. The constant absence of tubercle bacilli from the expectoration, in spite of repeated careful examinations, allowed but three lesions to be considered as possible causes for the physical signs present in the right side of the chest—primary endothelioma of the pleura, tumor of the lung itself, and non-tuberculous thickening of the pleura. The

latter was excluded by absence of retraction of the right half of the thorax, by the previous history of the case and the course of the disease, by the presence of an enlarged lymph-node above the right clavicle, and by the involvement of the adrenals. The history of quite early hemoptysis pointed to tumor of the pulmonary parenchyma rather than to endothelioma of the pleura.

As has been said above, careful examination of the right hip and thigh was impracticable without anesthesia, on account of pain, and the condition of the patient did not warrant either causing pain or administering an anesthetic. Owing to the apparently normal condition of the bones on superficial and hasty examination, the possible bony origin of sarcoma, with secondary pulmonary and suprarenal involvement, was not considered in making the clinical diagnosis. It might be added that after the patient's death, as his body was being turned on the back, the right femur suddenly snapped at its upper portion. It is, therefore, on the whole, well that thorough manipulation and handling of the thigh and hip for diagnostic purposes was not attempted during life.

PATHOLOGIC REPORT BY DR. STEELE.

Autopsy held at the Philadelphia Hospital seven hours after death.

There is a considerable increase of pigmentation on the face, hands, and genitalia, though not marked upon the hands. The scrotum is of a light sepia color. There is no discoloration of the mucous membranes. Dark hair and dark eyes. There is a scar behind the great trochanter of the femur, which is sharply and distinctly pigmented and is of a dirty-brown color.

Abdominal Cavity.—There is a hard mass in the head of the pancreas, about the size of an English walnut, which, however, is not adherent to any of the surrounding structures. The mesenteric glands are slightly enlarged, but do not seem to be affected by the new growth. In other respects the relations of the abdominal cavity are normal. The liver extends to the fourth interspace above, 2.5 cm. below the costal margin in the midclavicular line and 9.5 cm. in the median line.

Heart.—Relaxed. The ventricles are distended by hard, white coagula. The myocardium is pale and somewhat fatty. The valves and endocardium are normal.

Pericardium.—Normal.

Pleura.—The two layers are tightly adherent over the whole of the upper and middle lobes of the right lung. When traction is made upon the adhesions the visceral layer of the pleura separates from the lung over an area of degeneration in the middle lobe. In one place the cavity formed by the softening has ruptured into the pleural sac. The degeneration is evidently due to a new growth. The pleural sac upon this side contains 300 cubic centimeters of a blood-stained fluid, in which are floating masses of degenerated tumor-tissue which somewhat resemble blood-clots. The left pleura is free from disease.

Lungs.—The right lung upon examination is seen to be extensively infiltrated by the tumor-mass. The entire middle lobe and the lower half of the upper lobe are de-

generated and cystic. The pleura is thickened over the affected areas and studded with hard, white nodules. Similar nodules are seen in the lung-tissue around the edges of the degenerated areas. The upper part of the lower lobe is somewhat infiltrated, and is exceedingly congested throughout.

The left lung is normal. The bronchial lymphatic glands at the root of the right lung are much infiltrated.

Spleen.—Measures 11 x 12.5 x 2.5 cm. The organ is softer than normal. The pulp is semifluid and easily removed. There is a hard, white nodule about the center of the organ. The center of the nodule is slightly hemorrhagic.

Suprarenal Capsules are both much enlarged, the right especially so. Both capsules are studded by dense, white nodules which in some places are commencing to soften in the center. They vary in size from five to ten millimeters in diameter. There is an especially large nodule at the apex of the right capsule which appears to be hemorrhagic. To the naked eye there does not seem to be any remains of the normal tissue of the capsules.

Kidneys are normal in size. The capsules strip readily. The pyramids and medullary rays are congested. In one of the central pyramids of the left kidney is a hard, white nodule measuring three millimeters in diameter. The cortex on both sides is of the normal width and presents nothing of interest.

Ureters, Bladder, Rectum, Duodenum, and Stomach are normal.

Pancreas.—Thickly studded with nodules, especially at the head. Some of these are hard and white, while several show areas of softening in the center. The common bile-duct is surrounded by new growth. This apparently compresses it, but does not infiltrate its wall.

Thyroid Gland.—Normal.

Supraclavicular Lymph-Glands are enlarged, but do not seem to be involved by the new growth.

Semilunar Ganglia.—Of usual size and appearance; not involved by the tumor.

Intestines.—Normal.

Liver.—Uniformly and deeply congested. There are several white nodules upon the upper peritoneal surface of the right lobe which average eight millimeters in diameter. There are a few nodules scattered through the substance of the same lobe. There are irregular areas of a yellow color, evidently of a fatty change, scattered through the liver. The gall-bladder is distended by viscid bile and contains two semi-inspissated masses, which are dark-green in color and easily broken down. The common and cystic ducts are distended, but not markedly dilated. They average three millimeters in diameter.

Skeleton.—In the substance of the skull, in the parietal bone of the left side, is a round nodule, yellow in color and more transparent than the rest of the calvarium. On section this is found to lie in the diploe, is softened in the center, and resembles a new growth. It is one centimeter in diameter. The external table is pressed outward over this area.

The shaft of the femur on the left side, just below the anatomic neck, is much degenerated and breaks upon ex-

amination. The cause of the softening is evidently a focus of the same tumor-tissue seen elsewhere in the body. The whole shaft of the bone for eight centimeters below the anatomic neck is involved. The epiphysis is not affected. The growth shows much degeneration, and the softened material has formed a sac about the affected bone.

Brain.—Membranes normal. There is a recent apoplexy in the left crus cerebri, which has broken into the fourth ventricle. The clot is red and soft and perfectly homogeneous, and does not suggest a neoplasm. It is limited to the fourth ventricle and the crus.

Microscopic Examination.—A portion of the femur was decalcified, and the sections stained by hematoxylin and eosin. The tissue is in such an advanced stage of degeneration that it is the exception to find an area in which the nuclei take the stain. There is considerable osteitis and resorption of bone, and the only traces of the original structure of the part are scattered areas of bone-tissue. The sections contain much connective tissue, which appears to represent the periosteum. This tissue is hyperplastic, as shown by the number of round cells which it contains. In some areas there are alveoli which are packed by cells of a great variety of shapes. Some are large, round cells, with vesicular nuclei; others are spindle-shaped, with oval nuclei; others are small and lymphoid in character. An occasional giant-cell is found. In many places the nuclei have ceased to stain. The cells are degenerated, and are rounded and indefinite in outline. In many fields nothing can be seen but granular debris. The arterioles of the part show some thickening of the intima.

No sections were cut from the growth in the skull. Sections taken from the thickened visceral pleura show much round-celled infiltration and hyperplasia of the connective tissue. In places the collections of round cells are so considerable as to suggest sarcomatous tissue. The arterioles are thickened and surrounded by bands of connective tissue, but the areas of greatest inflammation lie around the lymph-channels. These vessels are much dilated, their walls are thickened, and they are surrounded by much round-celled infiltration. Their endothelial lining is thickened, and the lumen is packed by desquamated cells, between which there is a considerable amount of pigment. The endothelial cells are seen only in the lumen of the channels, and have not infiltrated the tissues. In nest-like spaces in the proliferating connective tissue are collections of polymorphous cells similar in the three main types to those of the growth in the femur. Giant-cells are rather more numerous. There is much degeneration of the nuclei of the polymorphous cells. Some show a condition of karyolysis with fragmentation of the chromatin; in others the nuclei are vacuolated, and in others there is hyperchromatosis, with lumping of the chromatin.

The nodules in the pleura and lung are found to consist entirely of cells of the most varied shapes, but which follow in general the three main types which are found in the other organs. There are also a few giant-cells, perhaps three or four in each microscopic field. The lymphatics are somewhat dilated and contain pigment, but

desquamation of the epithelium is not a prominent feature, though present in some places.

We have considered the significance of the dilatation of the lymph-channels and the desquamation of the endothelium found within them, and think that the condition is not one of new growth within the vessels, but a lymphangitis, probably caused by dilatation of the network of the lymph-vessels of the visceral pleura, produced by obstruction to the lymph-stream by the new growth. In support of this view is the fact that the evidences of inflammation of the pleura are much more marked around the lymph-radicals than around the smaller branches of the pulmonary artery.

The pancreas shows many nodules, consisting of the polymorphous cells described in the lung and femur. The degenerative changes in the chromatin are not as advanced as in the places already described. Here, also, giant-cells are found in moderate numbers. The small nodules in the liver consist of collections of cells similar to those described. Giant-cells are present.

In the right suprarenal capsule the tubules of the cortex show much degeneration. Many of the nuclei are fragmented and the cells are desquamated and granular. The connective tissue of the gland is hyperplastic and surrounds the tubules with dense bands of fibrous tissue. The nodule, described as softened and hemorrhagic, is found to be a focus of the tumor growth, similar to those described elsewhere. Into the mass there has been a profuse hemorrhage which has pushed aside the cells in a remarkable manner. There is very little fibrin present, and the red cells retain their outline unchanged. We consider, therefore, that the hemorrhage occurred but a very short time before death.

In the left capsule the cells of the gland are somewhat degenerated, and there is a slight hyperplasia of the fibrous tissue, but the changes are not as advanced as on the right side. The nodules scattered through both organs are found to be foci of sarcomatous cells, as described in the other organs. We estimate, however, that about one-quarter of each gland is unaffected by the tumor. The semilunar ganglia and nerves of the solar plexus were not involved in the growth, and on microscopic examination show nothing abnormal.

The skin shows many pigment granules which lie in and between the cells of the corium, but are very little, if at all, in excess of those found in the normal skin.

The pathologic diagnosis seems to us to be clearly that of a giant-cell sarcoma of the mixed type. The question of the primary seat of the growth has been most perplexing. The fact that but one lung is affected would suggest that the process might have originated in the lung; but we have concluded that it was primary in the femur for the following reasons:

1. It is a mixed sarcoma. The tumors of this class arising from the periosteum are usually of this type, while those originating in the lung are oftener of the small, round-cell variety.

2. Giant-cells are present in all of the sections. While these cells are not exclusively confined to sarcomata of bone, they are much more common in this locality.

3. The advanced condition of degeneration in the femur suggests that the tumor had been growing there for a longer time than in the lung, for the reason that such a condition would cause more rapid breaking-down in the softer tissues of the lung.

The sequence of events seem to us probably to be as follows:

1. Primary involvement of the periosteum of the femur.
2. Secondary growth in the lung, with extensive degeneration.

3. Metastases through the degenerated efferent pulmonary vessels to the left heart, and through the arterial circulation to the various organs.

The cerebral hemorrhage, from its small extent and from the evident freshness of the coagulum, seems to us to have occurred in the agonic period.

NOTES ON THE OPERATIVE TREATMENT OF COMPLETE VAGINAL AND UTERINE PROLAPSE; WITH REPORTS OF TWO CASES.¹

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THERE are few ills if any that womankind is subject to, other than malignant disease, which produce greater disability and discomfort than procidentia of the uterus, or, when the uterus has been removed, of the vaginal wall, accompanied as it is in the first instance by chronic inflammatory changes of the organ and, in either case, by the displacement of both bladder and rectum, with marked interference of their functions, this often being followed by cystitis and proctitis. The condition under consideration is that of a reducible hernia through the pelvic floor, and, as is well known, the most frequent cause of the difficulty is an unrepaired rupture of the perineum and an inability on the patient's part to confine herself to bed for a proper length of time after the birth of her child, thus causing a strain on the relaxed ligaments by the enlarged and heavy uterus. Therefore, it may be said that we have first a damaged perineum, accompanied by constipation, then a rectocele, then a cystocele, and finally the gradual escape of the uterus from the body. The sign of the disease is a local tumor, and the chief symptoms are backache, bearing-down pains, difficult and painful micturition and more or less inability to walk.

The patient on coming under our control should be placed in bed, and the parts reduced and held in position by tampons previously moistened with boroglycerid solution, attention being paid to the intestinal canal and bladder. The mechanic devices for the relief of the condition are numerous; the best may be said to be Gehrung's pessary and Braun's colpeurynter, but in the writer's opinion, the treatment, in a majority of instances, should be in the line of restoration of the damaged parts to their normal condition. If the patient is seen before the uterus has de-

¹ Read at the Thirteenth Annual Meeting of the Fifth District Branch of the New York State Medical Association, Brooklyn, May 25, 1897, and before the Waterbury Medical Association, June 14, 1897.

scended very far, an operation on the posterior and anterior walls may suffice, but when the prolapse is complete, additional means must be employed if we would permanently retain the displaced parts in their proper place; and it is the especial object of this paper to call attention to two of the more recent procedures that have been devised to enable us to accomplish this purpose, *viz.*, those of Baldy and Fritsch. In connection with this subject a report of the following cases will prove of interest:

CASE I.—On October 23, 1896, A. M., a widow, thirty-eight years of age, was admitted to the gynecologic service of the City Hospital. She said that she first menstruated during her fifteenth year, that the periods had been regular, and that the flow had ceased after the performance of an operation at another hospital about a year before. She had never miscarried, but had borne three children, sustaining an injury, due to the use of instruments, at her first confinement, which took place about eleven years prior to her admission. It was for the relief of this condition which, from the patient's description, appeared to be due to prolapse of the uterus, that the operation previously alluded to was undertaken. She also said that she was unable to retain her urine. On examination, a mass about six inches in length and four inches broad was found protruding from the vulva. The tumor proved to be the inverted vagina containing intestine and bladder, the latter holding twenty ounces of residual urine. The mucous surface of the vagina was dry but not ulcerated. The cervix was absent, but in its place there was a scar which showed that a vaginal hysterectomy had previously been performed.

On November 2d, after the patient had been prepared in the usual manner and anesthetized, the peritoneal cavity was opened by an incision in the abdominal wall to the left of the linea alba, and after the ovaries had been removed and the adhesions connecting the intestines to the vaginal sac broken up, the sac having been replaced and being held up by an assistant, the patient lying in the Trendelenburg posture, the vagina was attached to the remaining portions of the round and broad ligaments on each side by means of heavy silk sutures. The wound in the abdominal wall was then closed and ordinary dressings applied. The patient next was placed in the lithotomy position and an area two inches in diameter on the anterior vaginal wall was denuded of its mucous membrane. Beginning in the center of the denuded area and working from above downward tier-sutures of chromicized catgut were inserted, which caused the cystocele to disappear, a ridge of enfolded tissue being left along the anterior vaginal wall. The cut edges of the mucous lining of the vagina were then brought together by means of a purse-string suture of heavy silk after the method of Stoltz. Attention was next paid to the posterior vaginal wall and perineum. The flap-splitting method of Tait was employed, the dissection, however, being carried well up to the crest of the rectocele. After this had been accomplished, the parts were brought together by means of buried sutures of silkworm gut.

Convalescence was uneventful, with the exception of slight stitch-infection at two points in the abdominal wall.

On November 26th the patient was out of bed and about the ward, and her local condition was in every respect satisfactory. During April, six months after the operation, she was examined by the writer who found her perfectly well, she having regained full control of the bladder.

CASE II.—On November 17, 1896, M. R., a widow, sixty-six years of age, was admitted to the gynecologic service of the City Hospital. Menstruation had first occurred during her fifteenth year and had continued at regular intervals until her fiftieth; it was painless and of the monthly type. She had borne four children. There was no history of a miscarriage. She had enjoyed good health until about three years before when she had been knocked down and trampled upon by a horse, the animal planting its forefeet upon her abdomen. Soon after this occurrence she noticed that a tumor, which gradually increased in size, projected from the vaginal orifice. She had suffered from prolonged constipation, sometimes not having a bowel movement for sixteen days. This condition was usually followed by diarrhea. She also had been troubled with incontinence of urine.

Examination revealed the presence of a tumor about five inches in length which projected from the vagina, giving to the vulva the appearance of elephantiasis. At the apex of the tumor there were several points of ulceration. The condition was diagnosticated as one of complete uterine prolapse. As the patient was very feeble and anemic, and the urine was of low specific gravity and contained albumin, pus, and casts, it was decided that operative measures should be deferred. After a thorough cleansing of the inverted vaginal surface and ulcerated cervix with a solution of hydrogen dioxide, the parts were replaced and retained by means of cotton tampons previously soaked in a boroglycerid solution, which were removed and replaced from time to time. The bladder was catheterized every eight hours, and washed out with a boric-acid solution, and the bowels gradually unloaded by means of enemata and repeated small doses of calomel continued for several days at a time. Later, tonics, especially iron and strychnin, were given. Under this treatment the patient's general and local condition gradually improved, and during January, 1897, as she was anxious to be up and about, and as various futile attempts had been made to hold the parts in place by means of pessaries, it was decided to make an effort toward affording her permanent relief. As her general condition was such that the induction of general anesthesia was unwise, it was determined to rely on other means for the relief of pain during the operation, the method devised by Fritsch being the one best suited to the case. The patient's age made the obliteration of the vaginal canal unimportant.

On January 18th, after a hypodermatic injection of one-third of a grain of morphin had been administered, and she had been properly prepared, the cervix was seized with bullet-forceps and drawn down, and a small quantity of a weak cocaine solution injected under the mucous lining of the vagina. A buried suture of silkworm gut was then carried around the vagina a little above the cervix and the latter was pushed up. The suture, the ends of which

emerged from the same opening, was then drawn tight, tied, and the ends cut off short, causing the knot to disappear from view, and to be buried in the tissues. This procedure was repeated until six similar sutures had been placed, encircling the vagina at various points, which resulted in an entire obliteration of the prolapsed tissue and of a greater portion of the caliber of the canal. The perineum was split according to Tait's method, and the cut surfaces drawn together by means of several sutures of silkworm gut. During the operation the patient hardly complained of pain, and there was little or no evidence of shock. On January 25th the perineal sutures were removed, and convalescence was uneventful. On January 30th, twelve days after the operation, she was up and about the ward. She was seen by the writer during April, and her local condition found to be satisfactory. Her general condition also was much improved as she had regained control of both bladder and rectum.

The chief points of interest in the first case are, first, the procidentia of the vaginal wall following vaginal hysterectomy, which apparently had been undertaken for the relief of uterine prolapse. This condition, however, more frequently follows the removal of the uterus by the technic ordinarily employed, whether by the vaginal or abdominal route, than is generally supposed. In the second place, the laparotomy undertaken for the purpose of breaking up the intestinal adhesions and of attaching the replaced vaginal walls to the stumps of the broad and round ligaments near the pelvic brim on each side, prior to the performance of the operations on the vaginal walls, is worthy of note. This procedure is in line with Baldy's suggestion contained in an article, entitled "A New Operation for Uterine Prolapse," published in the April, 1896, number of the *American Journal of Obstetrics and Diseases of Women and Children*. He advises that in performing an abdominal hysterectomy, after amputating the organ at the internal os, the remaining tissue should be attached to the stumps of the broad ligaments on each side. The writer believes that this procedure is a good one, and that it should be employed in many cases of procidentia. For a number of years past he has endeavored to prevent the occurrence of a hernia of the vaginal walls following his operations for the removal of the uterus, for whatever cause, either by the abdominal or vaginal route, by closing the wound in the vaginal wall after attaching said wall to the stumps of the round ligaments. Another point of interest was the combined operation on the anterior wall.

The second case is of interest mainly because of the fact that it was possible to do all that was necessary for the patient's relief, notwithstanding her poor condition and inability to take a general anesthetic, with little or no pain, and that no unpleasant symptoms resulted from the procedure. It is also interesting to note that the permanent buried sutures in the vaginal wall, while retaining it in a good position, did not give rise to discomfort. This case would appear to demonstrate the fact that no matter how old or feeble a patient may be, or how bad her local condition, the case should not be considered hopeless, nor should the patient be allowed to remain a suffering, bed-ridden invalid.

THERAPEUTIC NOTES.

Radical Cure of Epithelioma.—*The Med. Week* of June 11, 1897, contains an article on the above subject by CERNY AND TRUNECEK. The preparation employed by them is a mixture of arsenious acid with alcohol and water, as follows:

R Powdered arsenious acid 1 part
Ethylic alcohol } aa 75 parts.
Distilled water }

The directions are to clean the ulcer thoroughly, although a few drops of blood are essential to the action of the remedy. The mixture is shaken, and applied with a brush. No dressing is needed. The arsenic mummifies the tissues and forms a crust, which grows thicker from day to day, as fresh applications of the mixture are painted over it. After the first crust comes away, the ulcerated surface is again painted, as at first. If on the following day there is the commencement of a new crust, the applications must be continued daily until this crust also comes away. If, however, on the following day there is only a thin, easily detached pellicle, then the cancerous elements are destroyed and the ulcer may be allowed to heal.

In the course of treatment, as the crust becomes thicker, the strength of the application may be increased with advantage from 1 to 150, at which treatment is begun, to 1 to 100, or even 1 to 80. To avoid contractions, the edges of the ulcer, when this is allowed to heal, are daily rubbed with boracic-acid ointment.

The writers report three cases of epithelioma of the nose cured in the manner described. One of the tumors was recurrent, one patient refused operation, and the other was refused operation on the ground that the growth was too far advanced for removal. Treatment lasted about three months, and the periods of freedom from recurrence have lasted now from six months to more than a year. Several other cases were treated without success, but in no instance were the directions faithfully carried out.

Combinations of Mercury for Subcutaneous Injection.—

R Calomel gr. xxiv
Sterilized olive oil $\frac{3}{4}$ i.

M. Sig. Fifteen minims to be injected once a week. This mixture should be sterilized at a temperature of less than 100° C. (212° F.)—*Fournier*.

R Binioid of mercury gr. iv
Sterilized olive oil $\frac{3}{4}$ ii.

M. Sig. Inject 15 to 30 minims every three or four days.—*De Lavarenné*.

R Cyanate of mercury gr. x
Sterilized water $\frac{3}{4}$ ii.

M. Sig. For intravenous injection, 15 minims; for subcutaneous injection, 25 minims.—*Abadie*.

A Skin Lotion.—DUHRING recommends the following preparation as a mild stimulating lotion for the skin:

R Zinci sulphat. } aa 3 ss
Potassii sulphuret }
Spt. vini rect. 3 iii
Aq. rosæ $\frac{3}{4}$ iii ss.

M. Sig. To be diluted, as required, for external use.

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SATURDAY, SEPTEMBER 11, 1897.

THE ABUSE OF MEDICAL CHARITY.

THE matter of indiscriminate abuse of medical charity at nearly all of the dispensaries of this city is of such paramount importance to all who have the welfare of the younger members of the profession at heart that it calls for immediate and decisive correction. It has been claimed that at least three out of five of the eight hundred thousand patients treated free of charge at the dispensaries during the year 1896 were able to pay at least a moderate fee for the services rendered, and the correctness of these apparently incredible figures being granted, the question naturally arises as to with whom the blame for this condition of affairs lies. It is a characteristic of human nature to obtain as much as one can for as little expenditure of time, energy, or money, and, this being the case, the item of medical services is no exception to the rule. From a strictly moral standpoint, then, at the door of this class of patients must be laid the censure; but should it not equally be directed toward those who not only permit but encourage the evil? The question can be answered only in the affirmative.

Many excuses for the present dispensary system

have been made, and when all have been given careful consideration the fact still remains glaringly evident that to the almost complete lack of systematic investigation as to the merit of an applicant is to be attributed the present unpardonable condition of affairs. Underlying this apathy, or purposeful negligence, it would seem, are three factors, to one of which one must look for an explanation of the cause. These are (1) a desire to show in the annual report of the dispensary a great array of figures which will convey to an admiring public an adequate idea of the great and beneficent work being done; (2) in those dispensaries connected with teaching institutions, the desire to preserve a sufficiently large *clientèle* to assure for the students a varied assortment of clinical material; (3) the praiseworthy effort to furnish to those young physicians who have not had the benefit of hospital training subsequent to graduation an opportunity to obtain experience which, later, will fit them for the supposedly extensive and diversified exactions of private practice.

Concerning two of these factors but little need be said. When it is remembered that at the so-called teaching dispensaries, perhaps one patient in twenty applying for treatment is brought before a class of students, and that this patient in a majority of instances belongs to the unfortunate poor contingent for which the free dispensary originally was designed, and which, sooner or later, inevitably finds its way there, this argument will be seen to be untenable. As for the young physician being catered to and regarded with fatherly solicitude by the governing boards of dispensaries, things medical surely have reached a most millennium-like pass if this is to be accepted as true, but, unfortunately, it is not. But in spite of this, the fact remains that the budding practitioner does lay in a store of valuable knowledge which will stand him in good stead during his professional life, and without which he is distinctly inferior to the more fortunate ones who are armed with the strength of a hospital experience. But is it at all necessary to open wide the dispensary doors to all comers, irrespective of social state or worthiness, in order that this knowledge may be gained? Can it not be obtained through the medium of that worthy class in which disease is sufficiently rampant to encourage the physician, be he young or old, to bend his every effort toward its alleviation? The

economic side of the subject also must be taken into consideration, for, when this same young physician attempts to build up the lucrative private practice of which he has dreamed, will he not find that the dispensary to whose success, in the eyes of the public, he has contributed is a rival too strong to be downed?

In the absence of these two factors it would seem that the one first mentioned must be responsible for the evil as it exists to-day, and the mainspring of this condition can be nothing less than a desire for personal aggrandizement.

It has been claimed repeatedly that the amount of medical charity abuse has been grossly exaggerated by those who are making an honest effort to reform it. The report of the special committee appointed by the Medical Society of the County of New York to investigate this subject should be accepted as conclusive in this respect.¹ The concluding paragraph of that report reads as follows:

"In conclusion, your committee expresses the conviction that there is no species of charity so beneficent, so far-reaching, or so generously bestowed as true medical charity, and that nothing could be further removed from its wish than that it should be curtailed or kept from the reach of the deserving poor; but it has been so conclusively demonstrated that there exists such gross and unpardonable abuse of that charity on the part of those who are not entitled to it that it has become imperative to adopt radical measures for the suppression of that abuse, and at once."

In order to carry out measures of reform in this as well as every other matter so vital to the public weal, practical unanimity of action is necessary, and this appears to be impossible in the present instance except under the guidance of a fair and honest law which, in the end, will confer benefit upon both the physician and the deserving applicant for his gratuitous care.

MRS. GRUNDY'S STRAIT-JACKET.

MUCH has been written in condemnation of the corset-wearing habit, but the probabilities are that many more reams of paper will be filled by eminent medical authority before a full realization is obtained of the manifold evils which follow in its train. The effect of the corset is obtained not only by preventing the wings of the lower chest and sides from expanding in inspiration, thus compelling the dia-

phragm to drive the viscera directly downward, but also by cramping and preventing the contraction of the wall-muscles, causing the anterior abdominal wall to bulge out and distend below, until the tone of the recti is destroyed. In this the corset, of course, is ably assisted by the drag of the heavy skirts usually worn and the consequent crippling of the movements of the lower limbs due to their Laocoon-like folds. Moreover, as Stockton has pointed out, these displacements seldom or never occur before adolescence, when corsets are first applied, and, with that rare philosophic breadth of view reaching far beyond the limits of his own specialty, and typified by his persistent contention that the cause of a very large number of the disorders of the stomach lies entirely outside of the organ itself, this observer declares that in his experience not only are a great number of gastro-intestinal diseases dependent upon displacements of the viscera, due to loss of tone in the abdominal muscles, but that much of the "backache" and dragging-down sensation, so common in women, are of identical origin. The commonest factor in their causation is prolapse of the colon, kidney, or stomach, instead of the uterus, as has been popularly supposed.

But the most serious charge against this garment has been made latest of all. The extraordinary predilection of chlorosis and the simple anemias for the female sex, and especially during the ten years following puberty, has long been a puzzle to clinicians. Light was thrown upon the question by the statements of Sir Andrew Clark and Carpenter, when they asserted that it depends upon constipation and the absorption of putrefactive products from the food-canal—a "stercoremia," as the former called it; but the problem still remained, Why does constipation begin so suddenly and universally at this age-period? Now, however, Glenard comes forward with the bold statement that a large majority of cases of chlorosis are toxemias due to ptoses of the food-canal, and the time of first wearing the corset is the period most fruitful in them. His position has been sustained and even extended by Sigaud in France, Meinert in Germany, and Stockton in this country. Meinert has made an especially elaborate study of the subject, and asserts that chlorosis is a secondary anemia and the direct result of enteroptosis produced by improper clothing during the developmental period in

¹ See THE MEDICAL NEWS, May 29, 1897.

girls. The result of treatment directed to the ptoses strikingly corroborates this theory.

In view of these facts, one is justified in urging the profession to yet another onslaught upon this modern Moloch. Nor will mere condemnation and destructive criticism suffice. We must be prepared to suggest a substitute. The skirt must be greatly lightened, shortened (if possible, divided), and strictly limited to the purpose of an external decorative drapery, with no reference whatever to warmth. Petticoats should be entirely abolished, or at least reduced to a single one of silk or light flannel, and warmth and protection of the lower half of the body secured *entirely* by means of close-fitting drawers ("tights"), stockings, and bloomers. All garments must be supported from the shoulders, either by direct continuation, waists, or broad and elastic suspenders. The superiority of the Venus-de-Medici waist over the "Redfern" monstrosity, and of the grace of movement and elasticity over dead rigidity of outline must be insisted upon, and the love of beauty called to our aid. Every convention or habit, either of dress or behavior, which interferes with free play and development of all the muscles of the abdomen and chest-walls must be swept away.

The odds against us are heavy, but we have a new and powerful ally just now in the shape of the bicycle. As a writer in these columns remarked some months ago, the wheel "has already effected a breach in the rampart against which the profession and the pulpit have been thundering in vain." The heavy, crippling, and back-breaking skirt is going; may we not hope that the corset will be the next to follow?

ECHOES AND NEWS.

Medical Journals of Paris.—There are 120 medical journals published in Paris.

The Royal Victoria Hospital, Belfast.—The sum of \$500,000 has been raised to found a new hospital in Belfast in commemoration of the Queen's Jubilee.

Appropriation for a Bacteriologic Laboratory.—The Legislature of the State of New Jersey has granted an appropriation of \$3000 to the Bacteriologic Laboratory at Princeton.

Professor Koch and the Rinderpest.—It is reported that Professor Koch will return to South Africa in order to make further investigations and experiments in regard to rinderpest.

Typhoid Fever in Dawson City.—The news comes from St. Michaels, Alaska, that typhoid fever is epidemic among the miners at Dawson City, and that several deaths from the disease have occurred.

Beef from Cows Killed by Lightning.—A man was recently held in the Liverpool, England, city police-court for exposing for sale the carcasses of cows which had been killed by lightning. The meat was unfit for human food.

Premium for Twins.—A Brooklyn, N. Y., landlord offers a house and lot rent free to the first family among his tenants to whom twins are born. To the first family to whom triplets are born he will present a house and lot.

Inspection of Chinese Laundries.—An inspection of Chinese laundries has been ordered by the Health Commissioner of St. Louis, Mo., who fears that some may mouth-spray their work with tubercle bacilli and thus spread contagion.

Gold Medal for Professor Kolliker.—Professor Kolliker of Wurzburg has been awarded the Gold Comenius Medal by the Imperial Leopold-Carolina Academy of German Scientists of Halle, in commemoration of his eightieth birthday and jubilee of his appointment as professor.

Bellevue Hospital Medical College's New Building.—Plans for the new building of the Bellevue Hospital Medical College have been filed with the Building Department. It is to be erected on the corner of First avenue and Twenty-sixth street, adjoining the Carnegie Laboratory, and is to cost \$95,000.

Cerebral Hemorrhage and Wheeling.—A Syracuse, N. Y., woman, while making a run on her bicycle last week, was riding rapidly with her companions, when she suddenly threw her hands to her head and uttered a sharp cry. When lifted from her wheel life was extinct. A necropsy showed a ruptured vessel at the base of the brain.

To Care for Sick Plants.—In Berlin the Institute für Pflanzen Physiologie und Pflanzen Schutz gives, without charge, advice and information regarding diseases and injuries of cultivated plants. It will also send agents to examine plants without charge beyond the railway ticket, which, in some instances, will be paid for by the institute.

Death of Dr. Cornelius Kollock.—The death is announced of Dr. Cornelius Kollock at his home in Cheraw, South Carolina, on August 17th. Dr. Kollock was graduated from the University of Pennsylvania just after the War and then went to Europe, where he studied under Velpeau. He was one of the most eminent physicians in the South and an authority on abdominal surgery.

Suspicious Death of the Late Shah's Physician.—It is reported in Paris that the death of Sir Joseph Tholozan, physician to the late Shah of Persia, was due to poison. For thirty years he was the trusted confidant of Nasr-ed-Din and it is supposed that his knowledge of court secrets made his removal desirable. He was a native of France and seventy-seven years of age at the time of his

death. His predecessor at the Court of the Shah also was poisoned, it is said.

The Record Broken.—What appears to be an authentic case of a woman who has given birth to four pairs of twins has been reported in St. Louis, Mo. The woman in question, who is only eighteen years of age, has lived in East St. Louis during the past five years and recently applied to Dr. Woods, Supervisor of the Poor, for food for herself and children, of whom all but three are dead. Dr. Woods carefully investigated the statements of the woman and found them correct.

Origin of the Bombay Plague.—It is generally believed that the plague was imported into Bombay from China via Singapore. However, Dr. Hutcheson, Sanitary Commissioner of the Northwest Provinces, thinks that it comes from the mountain region of Gurhwal, 3000 feet above the level of the sea, where it makes its appearance every year and is nurtured and perpetuated amid the filth which accumulates under and around the dwellings of the ignorant people who inhabit these otherwise healthy altitudes.

Röntgen Rays Made Harmless.—From time to time since the use of skiagraphy became general in medical and surgical practice unexpected effects have been observed to follow its application in a limited number of instances. That this malign influence upon the tissue is not a constant or necessary quality of the ray is evident from the fact that its disastrous results only occasionally appear. Without being able to offer a theoretic analysis of the problem Mr. Elliott Woods of Washington, D. C., has made the practical suggestion that a film of gold foil properly prepared will arrest the undesirable elements in the field of radiation.

The Leprosy Congress at Berlin.—Twenty-one papers on subjects of debatable interest will be read by invitation at the Leprosy Congress to be held at Berlin October 11th to 16th, next. Among them may be mentioned those of Professor Koch, on "The Place of Leprosy among the Infections;" of Professor Virchow, on "The Pathological Anatomy of Leprosy;" of Dr. Unna, on "The Histology of Leprosy;" of Professor Neisser, on "The Extent to which the Bacillus Lepræ Should Be Regarded as the Cause of the Disease;" of Professor Campana, on "The Cultivation of the Bacillus of Leprosy," and of Professor Besnier, on "The Value of Heredity and Transmissibility as Etiologic Factors."

Persecuting Chinese Laundrymen.—An enterprising proprietor of several laundries in the upper part of New York City has been circulating what purports to be a notice from the Board of Health warning people of the prevalence of leprosy in the Chinese quarter of the city. The circular is really an abstract from the report of the Board of Health for 1891, in which one of the health commissioners made mention of leprosy among the Chinese residents of New York. The object in casting it broadcast is evidently to deter people from patronizing Chinese laundrymen and in this way to increase the business of the afore-

said enterprising proprietor. The attention of the Chinese minister has been called to the matter, and he has already written to the Board of Health to ask for an explanation.

Sanitation and the Death-rate.—The last report of the Health Board of New York City shows an encouraging decrease in the mortality-rate, especially from diarrheal diseases. Even those districts whose inhabitants are most inimical to the exercise of sanitary laws show that great improvement has followed the enforced cleaning of streets and the regular removal of garbage. The condemnation and abandonment of tenement-houses which have heretofore successfully resisted the promulgation of the proper principles of ventilation and decent existence will even further improve the statistics. The Board of Health should always have encouraging support and popular appreciation of its laudable efforts.

"The Christian" and Matters Medical.—In his latest contribution to fiction Mr. Hall Caine has indulged in certain assertions which must strike his medical readers with consternation at the ruthless manner with which he brushes aside the time-honored principles underlying their science. Thus, when she is further unnecessary to his plot he staggers pharmacology by removing a flighty female with "half a grain of liquor strychnin." Medico-legal traditions are not less abruptly overturned in his description of a still-born child as "one that has breathed but never cried." In what a state of dismay must the plodding man of science await the further revelations of this rising genius.

Tuberculosis in a State Institution.—The Board of Regents of the State Agricultural College of Kansas has discovered that the domestic animals at the college farm are not only infected with tuberculosis but that the disease has been communicated to many of the attendants in charge. In at least three of those who reside on the farm the infection has brought them to Death's door. In view of the serious nature of affairs an order will be given for a general slaughter of the cattle at an early date, with provisions for *post-mortem* examinations. That such a state of affairs should be allowed to develop in an institution devoted to the teaching of scientific farming must bring humiliating reflections upon its sponsors.

The Private Madhouses of England.—Mr. George Russell, Under Secretary of State for the Home Department in the Roseberry administration, has inaugurated a movement calling for the abolition of private madhouses and will ask Parliament to take vigorous action to this end. He asserts that while in office he had exceptional facilities for studying the subject of private lunatic asylums, that they constitute the greatest iniquity in England, and announces that he will produce before the House revelations of the most startling character. Mr. Russell declares that a man should have no more right to keep a private asylum than a private prison; that the alleged inspection of such of these asylums, as are known, is a mere farce, and that the most incredible cruelties are perpetrated behind their walls.

Yellow Fever in Mississippi.—A well-authenticated report has just been received of the appearance of yellow fever on the coast of Mississippi, at a watering-place known as Ocean Springs. Suspicious cases have been observed during the last fortnight and as death has occurred in several instances, the character of the malady has been so well established that the Health Officers of the neighboring states have published the information and ordered rigid quarantine measures against the unfortunate resorts. At least one person, in whom the disease proved fatal, had returned to New Orleans before its nature was suspected, and many sensational reports of deaths in other places have been promulgated. It is safe to predict that most of these will not merit credence when carefully investigated. The Health Boards of Mississippi and Louisiana, as well as that of New Orleans, assert confidence in their ability to control the present outbreak. The source of the infection is not yet clearly established, but the quarantine station at Ship Island has been in close communication with Ocean Springs, and is naturally suspected, as vessels from subtropical countries where yellow fever is endemic constantly touch at this point for government inspection.

CORRESPONDENCE.

TWELFTH INTERNATIONAL MEDICAL CONGRESS.

[From our Special Correspondent.]

THE TRIP TO MOSCOW—ENTHUSIASM OVER RUSSIAN HOSPITALITY—PERFECT ARRANGEMENTS FOR THE MEETING—THE FIRST GENERAL SESSION.

MOSCOW, August 20, 1897.

THE Twelfth International Medical Congress has been inaugurated under most favorable circumstances, and the general impression conveyed to the minds of those who have come so far to attend it is exceedingly satisfactory. Despite the immense number of travelers which the Russian railroads, unused as they are to handle great crowds, have had to accommodate, all reached Moscow in comparative comfort and nearly always on time. The comparison between the treatment received at the hands of the railroad officials of neighboring countries, such as Austria and Germany, by whom no reduction in fares was allowed, was distinctly favorable to the Russians. There was not so much huddling of passengers into crowded compartments for night rides, and very seldom were they required to travel in cars of the class below that for which they held tickets.

Any uneasiness as to personal inconvenience at the frontier vanished before the courtly reception of the Russian officials. At once the impression was conveyed that the doctors were the guests of the nation, and that everything possible was to be done to make them appreciate the fact. Nearly every one had come to Russia with the idea that passport and customs inspection at the border would be annoying at least, and all were agreeably disappointed to find that these expectations were not to be realized. As the president said, in his opening address at the first general session, it was the East of

Europe welcoming the West of Europe, but it was always *Europe*, and the greeting was not from stranger to stranger. As one penetrated further into the country, one realized that Russian hospitality is not merely a name. Those who came by way of Odessa found, more than one thousand miles from Moscow, a committee waiting to receive them, which had guides and carriages for them, and entertained them at a supper and concert in the evening. At Kiev a committee made the mysteries of the Russian language easy in the relations with the townspeople, and enabled the stranger guests to see the quaint and curious sights of the Jerusalem of Russia, the oldest holy city of holy Russia. At Warsaw the doctors from the West found other committees equally ready to make their visit a pleasantly memorable one. Meantime, the doctors themselves put up with the inconveniences of traveling in crowds with their usual good nature. The railroad restaurants were utterly unused to such crowds, and the scramble for food at the ordinary eating-places was a struggle for existence in which, in true Darwinian style, the weaker went to the wall. But everything came to him who waited, and Russian forethought had anticipated the difficulty and at other stations extraordinary preparations were made and all wants satisfied. Doctors are doctors the world over, and in a babel of tongues that defied elucidation the burning medical questions of the day were discussed. In the intervals, the foreigner read Tolstoi or the inevitable Bædeker, while some of our Russian confrères were dipping into our literature in order to comprehend us better when we should meet on the floor of the hall of debate. One whom I saw had "The Light that Failed," and another "Trilby." How thoroughly they were able to understand our characters after these literary experiences may well be imagined.

We really only understood all that the committee had done to make us at home when we reached Moscow. At once the Lodging Committee found rooms for us, all a little expensive, to be sure, for Moscow has more visitors than she ever had before, on a peaceful mission, at least. There are more than 10,000 here on account of the Congress, and 7500 of the number are physicians and their female relatives, more than one-half of the former being Russians. Germany and Austro-Hungary have each sent about 800 delegates, France 400, Italy about 400, England 300 (according to Sir William MacCormac), and the United States about 120. The arrangements for accommodating this immense crowd at moments when its members come together are excellent. The Central Bureau is in a huge building 500 feet long and 125 feet wide, built for the indoor maneuvering and inspection of troops. It has kindly been lent by the government. The general sessions are held in the Grand Imperial Theatre, which is probably the largest in Europe and seats more than 4000 people.

Every day about lunch-time most of the visitors meet in *La Manège*, the hall of maneuvers, and crowd it to its capacity, showing how useless would have been the effort to transact the business of the Congress in any ordinary building. Here are the post-office department,

a money-exchange office, the General Committee's office and the bureaus of the various sections, besides a restaurant. Nothing has been forgotten, and as time goes on, the enthusiasm over Russian hospitality waxes rather than wanes. The social features are to be such as the crowd can enjoy in its entirety. There has been a reunion, with supper for all, in the galleries of the Hall of Commerce, and a musical soirée in a public garden and a ball at the Noble's Club, another of Moscow's large buildings, are to be given next Monday.

The first general session was presided over by the Grand Duke Sergius Alexandrovitch, governor-general of Moscow, who has ably seconded the committee in all its efforts to make the Congress a success. The Grand Duchess occupied one of the boxes with the ladies of her suite. The first part of the proceedings consisted in listening to the greetings of the delegates of the various governments to the Congress. The German ambassador, General Rohler, brought the assembly to its feet when, at the end of his greeting, he called down a blessing on the Czar. It is the imperial generosity and liberality which has made the success of the Congress and a becoming exhibition of Russian hospitality possible. Mention of the name of the Czar frequently called forth enthusiastic applause. It was the "Little Father" of all the Russians, not the absolute monarch of the two Russias whom the cultured though heterogeneous assembly united in applauding.

It had already been announced that the trip to St. Petersburg and return would be free, and the representative of the municipal council of the city invited the delegates for the three fête days, the 28th, 29th, and 30th of August. Moscow, he said, is the heart of Russia, but they would find in the North that while the head might deliberate the welcome would be as cordial.

The preliminary business of reception being over, Virchow advanced and received an enthusiastic ovation from the immense audience that showed how much the medical world appreciates the labors of the grand old man of medicine. Instead of speaking, as announced, on "The Rôle of the Vessels in Inflammation," he reserved this theme for his paper before the Section on Pathology and spoke of "The Continuity of Life as the Foundation of Biology and Pathology." It gave him the opportunity to trace the rise of the cellular pathology with which he has had so much to do, and to review the stormy discussions which have divided scientific opinions during the second half of the century. When he reviewed spontaneous generation he paid a glowing tribute to Pasteur, which was the signal for prolonged applause. He complimented the medical world on the fact of having educated public opinion, so that now unfounded theory does not receive so ready acceptance as in the early part of the century. Much remains to be done, but still no minister of public instruction would want to found in our day a professorial chair at the University for Animal Magnetism, as was done during the Forties. Theory is giving place to science at last, and more and more is being attributed to living agencies rather than to dead chemic or other scientific forces. This is the line of true

progress, and he who studies serum as serum for its chemic constituents, and not as the result of the forces which made it, is sure to go wrong. The talk was delightfully discursive, as the reminiscences of the veteran recalling the half century in medicine *quorum ille pars magna fuit*.

Lannelongue reviewed the sclerogenic treatment of tuberculous abscesses, but made the old subject new, in a charming French address, which made one think, when the end was reached, that surely at last the millennium had come in the treatment of cold abscesses. Then Lauder Brunton, on "The Relations between Physiology, Pharmacology, Pathology, and Practical Medicine," vindicated the claims of chemistry to the gratitude of medicine. As time went on this debt became greater rather than smaller, and now the physiologic processes are resolved into chemistry, and pathology has taken to chemic explanations of disease in the study of the toxins. For him, the horizon of medicine is everywhere *chemistry*, and so, on the same day, at a general session of an International Medical Congress, the last of the Nineteenth Century, there are two essentially opposite opinions as to the lines of the development of medicine.

OUR VIENNA LETTER.

[From our Special Correspondent.]

THE GENERAL ASSOCIATION OF AUSTRIAN WOMEN AND THE REGULATION OF PROSTITUTION—BARON ROTHSCHILD'S BLOOD AND THE TENDENCY TO FORM MONEY ROULEAUX—KOCH'S NEW SERUM NOT MEETING WITH APPROVAL OR SUCCESS—THE APE COLONY AT SCHONBRUNN AND THE CONTAGIOUSNESS OF TUBERCULOSIS.

VIENNA, August 22, 1897.

SHORTLY before the close of Parliament a petition was presented to that body on the part of the Allgemeiner Oesterreichischer Frauenverein (the General Association of Austrian Women) asking for the abolition by law of the licensed houses of prostitution in Vienna. The petition was laid on the table by the committee to which it was referred in the ordinary course of parliamentary routine, but not until some remarks had been made which found their way into print, and which were to the general effect that the women should mind their own business. Some remarks on the petition, its signers and its contents were made after the adjournment of Parliament in the *Wiener klinische Wochenschrift*, and these were answered by two prominent members of the Women's Association in the last number of the *Wiener klinische Rundschau*. That this will not be the end of the discussion seems probable, especially as up to the present time the women have the best of the argument, to say nothing of their having had the last word. Meantime, the political press has taken the matter up, too, and so the whole problem of dealing with the social evil is being discussed from various points of view. The attempted solution of it here by the legal licensing of houses of prostitution, and the issuing of "books" (*i. e.*, licenses to ply their trade to prostitutes living apart, the books containing the record of their medical and police inspec-

tions) does not strike one as even a satisfactory makeshift under the circumstances. It makes the formal admission that prostitution is a necessary evil, and thus does away with the best safeguard of the young by the public announcement that continence is considered practically impossible. The favorite argument of the advocates of the legal regulation of prostitution is that the evil has always existed and always will exist, and that as it is inevitably bound up with the conveyance of disease the law has a right to step in for its regulation. Casually, it might be said that there is no form of crime or evil that has not always existed, and that we have not reached the millennium by any means even in our enlightened end of the Nineteenth Century. We have not reached that stage of development, however, in our cult of humanity where we allow the man who has inevitable tendencies toward murder or robbery to put his tendencies into effect provided only he practises his failings on a certain class of the community.

It is often said that the question is not a moral but a medical one; that theology has naught to do with it, and that it is a matter of public hygiene. It is to be hoped that the question of right and wrong in the matter does not cease to have its place because the health of those who voluntarily expose themselves to contagion is threatened.

Under the system here, while the legal acknowledgment of the existence of prostitution, with the moral evils consequent on such a public acknowledgment, is made, the advantages gained are of the most illusory and problematic character. No medical examination, however thorough, can give absolute assurance of the absence of the germs of venereal disease, and only in frankly outspoken cases where the danger of the infection of others is but slight anyhow does it accomplish its purpose. Then the existence of licensed houses and licensed women only seems to leave the door wider open for the existence of what the French call "*prostitution libre*." Quite as much trouble must be taken to suppress this as if legalized prostitution did not exist, and police regulation seems to be as ineffectual in doing it as it does everywhere else. The fact that there is legalization deprives public sentiment of its greatest force. Making a regular legalized business of the matter effectually deters the ordinary young man from taking advantage of what a too-fond paternal government has established, supposedly for his benefit, but does not encourage him to any self-control in the premises, seeing that it is supposed that he is incapable of it. Only the most hardened *roués*, usually well on in middle life, and married men, form the customers at the government's shop. The matter is too broad for discussion even in a letter like this, but those who talk of the regulation of prostitution in the United States by any such measures as here employed should first study closely the practical application of the question as here demonstrated.

Not long ago one of the distinguished clinical professors was summoned to the house of the Austrian member of the famous banking family of Rothschild. He was accompanied by a younger member of the profession who while his chief was making the general clinical examination, proceeded to examine the baron's blood. The

banker was extremely interested in the procedure, and when the examination was concluded asked what he had found. The assistant replied that he had found everything perfectly normal and healthy; that there was the usual number of red blood-corpuscles, showing no marked differences in size or shape, and there was a very normal tendency to the formation of money rouleaux. The distinguished patient, who is well acquainted with the hereditary failing of his family in the matter of successfully forming money rouleaux, but who did not realize that this tendency was so outspoken that it could be discovered on microscopic examination of his blood, was very much amused. He was at first inclined to consider the expression as not quite serious and as meant to stave off questions on the part of an inquisitive patient. When assured, however, that the description was eminently scientific his admiration for the "new medicine" was correspondingly increased. "What is bred in the bone, will out in the blood," I suppose received a striking exemplification for him. When the visit was over and the doctors were leaving the fee the younger man found in the envelope handed him by the baron's secretary was not smaller for his chance excursion all unwitting into the atavistic peculiarities of the Rothschild family in his perfectly commonplace description of the results of a blood examination.

Koch's new tubercular serum has now been in use here for some time, and the results obtained from it seem to be no better than with the original tuberculin. There seems to be no special danger in its use in its present modified form, though it has been noted that patients who, under the ordinary treatment for consumption (plenteous feeding with abundance of light and air), had been gaining in weight sometimes lost in weight after the beginning of the injections. The curative properties of the new remedy, moreover, are very problematic. No one seems as yet to have noticed a frank decrease or disappearance of tubercular patches in the lungs which could be demonstrated by the ordinary physical signs. On the contrary, it has been noted that while patients from systemic accommodation to the remedy could take comparatively large doses of the tuberculin without the occurrence of febrile reaction yet the disease itself could be demonstrated by positive physical signs to be advancing.

Some abscesses have been noted, too, at the points of injection, and the bacteriologic examination of certain samples has shown that it was not always sterile but contaminated at times with staphylococci, sometimes even with streptococci. This seems to be the result of carelessness in filling the receptacles. It is all the more surprising as the preparation is an expensive one, and is put up by a firm to which the work was especially entrusted by its inventor for the express purpose of avoiding such inconveniences. One prominent clinician insists that samples should always be thoroughly examined by culture methods before use.

As in most large cities, Vienna has a never-failing source of amusement for her holiday crowds in the collection of monkeys in her zoologic garden at Schönbrunn. At present there is a gamboling crowd of them seemingly in perfect health, but it has not always been so,

and the story of the vicissitudes of the ape colony at Schönbrunn is an interesting chapter in the contagiousness of tuberculosis and the danger of infection from association with the tuberculous. Some years ago so many of the animals became tuberculous and died that their quarters were completely destroyed, everything wooden about them being burned and every possible precaution taken that the new quarters should be absolutely clean. Almost an entirely new collection of apes was purchased, and it was hoped that the trouble was over. Soon the deaths from tuberculosis began once more. Each of the dead animals was kept only long enough to allow of demonstration *post-mortem* that the cause of death was really tubercle, and then the carcass was burned. Notwithstanding this precaution, and frequent careful disinfection, the disease waxed fiercer, and in the course of some months seventy-five of the animals perished from it. The collection was practically annihilated. Careful observation showed that some of the animals had brought the seeds of the disease with them. As apes do not die frequently from tuberculosis in their wild state, it was concluded that the animals became infected while in the hands of the dealers. They are kept by these people huddled together in extremely limited, unclean, badly ventilated and overcrowded quarters while waiting a purchaser. One affected animal would easily infect others, especially on account of the extremely lowered resistant vitality of their utterly unsanitary captivity. The next batch of apes was obtained direct from the Austrian consul in India, and was shipped direct to the zoologic garden. Since then all the specimens from abroad have been obtained in this way and the animals suffer no more from the disease. The system has been in vogue now for about two years and is eminently satisfactory to the management which was beginning to fear that it would be impossible to keep apes at Schönbrunn at all. The lesson learned by this experience is all the more striking as the ape is in general a rather cleanly animal, does not meddle with excretions of any kind and is especially particular about his food, refusing to touch it if it is dirty. In addition, the ape is not a carnivorous animal, so that a number of sources of infection are shut out. The milk which was supplied to them at Schönbrunn was obtained from the cows belonging to the gardens.

A more absolute demonstration of the danger from the contagiousness of tuberculosis could scarcely be had. Intimate association with those affected by the disease, when for the moment the healthy are in poor hygienic condition, or their resistant vitality is lessened, evidently in many cases, is the cause of the disease.

OUR PHILADELPHIA LETTER.

[From our Special Correspondent.]

THE OBSTETRICAL SOCIETY OF PHILADELPHIA—BACTERIA AS A FACTOR IN THE PRODUCE TRADE—PHILADELPHIA'S REPRESENTATIVES AT THE MONTREAL MEETING OF THE BRITISH MEDICAL ASSOCIATION—VITAL STATISTICS FOR THE WEEK ENDING SEPTEMBER 4TH.

PHILADELPHIA, September 4, 1897.

The first stated meeting since the summer vacation of

the Obstetrical Society of Philadelphia was held on September 1st, and was marked by the presentation of a remarkably able set of papers. The first communication read was one from Dr. Wilmer Krusen, on "The Treatment of Uterine Prolapse," in which a conservative plan of treatment for these cases was recommended, rather than a too-ready recourse to hysterectomy, without due regard to the indications for such a grave procedure. Dr. Krusen summarized the histories of fifteen patients upon whom he had operated, and detailed especially the post-operative course of treatment which he observed. For the operation of perineorrhaphy he considered Emmet's operation undoubtedly the best, and advised its literal application; for anterior colporrhaphy Stoltz's or Hegar's operation is most useful. The discussion which followed this paper was participated in by Drs. Richard C. Norris, John C. Da Costa, and E. E. Montgomery.

Dr. J. M. Fisher read a paper on "Cancer of the Uterus, and the General Practitioner." It was maintained that the general practitioner, because of his neglect of the recognized symptoms of this disease, due perhaps to carelessness in not examining patients with suspicious symptoms, perhaps to his interpretation of such phenomena as belong to the disorders of the climacteric period, oftentimes allowed the disease to progress to a stage at which operative measures are out of the question. Pain, said the speaker, is falsely considered as one of the early symptoms of cancer, whereas in reality it is usually not noticed until late in the disease. It was promulgated as a safe rule that all women presenting at all doubtful symptoms at the time of the menopause should be carefully examined for the existence of carcinoma uteri.

Dr. Richard C. Norris presented a series of "Clinical Notes," dealing with various gynecologic conditions, the chief of which were a case of bilateral broad ligament abscess, and a case treated by means of antistreptococcic serum. Dr. William E. Parke also presented several clinical reports of cases.

While it is true that bacteria have been utilized to some slight extent for the production of a good flavor in dairy products for some time past, it is but recently that the micro-organisms have been grown especially for this purpose, and have become a commercial article in the produce trade, and that thousands of dollars worth of this artificial "starter" in the making of butter and cheese has been sold yearly in all parts of the world.

The headquarters for the dissemination of these bacteria is in this city, where a company has been organized with a capital of \$100,000, and is doing a flourishing business, from all accounts, in this unique line of trade. Already many large dairy companies in all parts of this country, in Canada, in the British Isles, and even as far away as Australia may be found among the patrons of this highly enterprising corporation, and the shipment of culture tubes of the desired germs is reported to be a matter of large interest to the produce trade.

It is claimed that these bacteria produce a uniform flavor in butter, so that the popular "June" flavor may be secured at any time of the year, and that by the same agency the flavor of cheese is regulated to suit the fancy

of the consumer. It will be interesting to observe how the public and the health authorities take this innovation, which seems to have assumed proportions worthy of attention; for the practice is one which is capable of extensive abuse in the hands of unscrupulous tradesmen, who may care more for the dollar which the "butter culture-tube" brings than for the purity of its contents; so still another commodity is presented for the criticism and examination of the State factory inspectors, who already, in their insufficient numbers, have all they can attend to in other fields.

Philadelphia medical men are well represented at the meeting of the British Medical Association which is about to come to a close at Montreal. A large number of the physicians of this city are in attendance at this convention by invitation, among whom may be mentioned Drs. James C. Wilson, John Ashhurst, Jr., George M. Gould, James Tyson, John H. Musser, M. Howard Fussell, and W. A. N. Dorland.

The deaths in this city during last week numbered 399, an increase of 12 over the preceding week, and of 37 over the corresponding period of last year. Of the total number of deaths, 150 occurred in children under five years of age. The number of infectious diseases did not differ materially from that reported last week.

TRANSACTIONS OF FOREIGN SOCIETIES.

Berlin.

THE ADVANTAGES OF PUNCTURE AND CONTINUOUS DRAINAGE IN DISEASES ATTENDED BY EDEMA—THE CLINICAL DIAGNOSIS OF SCROFULA—ENDOCARDITIS TRAUMATICA—CANCER OF THE ALIMENTARY TRACT, ESPECIALLY WITH REFERENCE TO ITS TRAUMATIC ORIGIN.

BEFORE the Medical Society, May 26th, Ewald spoke of the advantages to be derived from puncture and continuous drainage, *in diseases accompanied by edema*, such as cirrhosis of the liver, nephritis, heart failure, etc. The following case was presented as illustrative of the subject: A man developed an acute attack of nephritis and was admitted to the hospital August 31, 1896, with uremic symptoms and marked edema. Delirium rapidly followed. The urine contained two per cent. of albumin, hyalin casts, and red and white cells, but no pus. The abdomen was tapped and the ascitic fluid removed. In addition, one and sometimes two trocars were kept in each leg. From September 10th to December 3rd forty-five pints of fluid was obtained from the legs in this way. The pleural cavity was tapped five times, and forty ounces of fluid obtained. From October 6, 1896, to March 13, 1897, the ascitic fluid was drawn off forty-five times and measured 291 pints, a quantity weighing considerably more than the patient himself. During this treatment the amount of albumin in the urine varied, but, on the whole, constantly grew less.

The final results of the treatment were satisfactory. Not one of all these punctures was followed by necrosis, gangrene, or erysipelas. Only once there was a slight dermatitis, which occurred without known cause, and rapidly subsided under the use of compresses saturated

with alcohol. The patient, when presented, still had some edema, but all trace of ascites was gone, and he was in fairly good health. There was a little hypertrophy of the heart. At one time, for a short period, the type of the ascites changed from serous to chylous.

Ewald had seen good effects follow this continuous drainage in numerous other cases, and he warmly advocated the practice of allowing the escape of accumulated fluid as soon as possible. The advantages of this removal are so apparent as scarcely to need mention; the pressure upon the vessels of the abdomen, upon the intestines, and upon the liver is at once relieved; and still more important, perhaps, is the relief of pressure upon the heart and lungs. As a natural result, all these organs can better perform their functions, and Ewald was of the opinion that he had saved several patients from death by a timely and thorough tapping and drainage. Of course, no one must make the mistake of supposing that a cure is affected by this treatment. The disease which caused the edema, in this patient remains, but, although he has the nephritis to contend with, he is in a totally different condition to meet it than he would have been without this relief.

Klemperer urged against this treatment the fact that collapse or even fatal hemorrhage may follow it. It is not difficult to understand that the sudden and too great relief of pressure on the abdominal vessels is followed by their great distension, and by a corresponding withdrawal of blood from the brain.

Senator admitted the possibility of hemorrhage from the portal vessels, though he had never seen such an occurrence. To avoid this, all of the ascitic fluid should not be withdrawn at one time, and further, the patient should lie down during the process of tapping.

In closing the discussion, Ewald said that it would indeed be foolhardy to withdraw six or eight liters (quarts) of ascitic fluid during ten minutes; that one ought to use a small trocar so that the fluid passes away very gradually. He himself uses a needle not much more than twice the thickness of a knitting-needle. When the tapping is performed in this manner, the vascular system has time to accommodate itself to the condition of altered pressure, and the extra time thus lost to the physician is time well spent. He had never seen bad results, due either to cerebral congestion or to abdominal congestion or hemorrhage, follow, and he said it was not clear to him that the relief of pressure could result in the rupture of a blood-vessel, as by that very relief of pressure the overaction of the heart would be reduced.

At the session of June 16th, Neumann spoke of the *clinical diagnosis of scrofula*, which he defined as identical with tuberculosis, a "scrofulous diathesis" being simply a tuberculous one, and a "disposition to scrofula" merely a disposition to tuberculosis. The commonest development is in the glands of the neck. It has been suggested that the infection here is from the throat, but this has not yet been proved. Certain it is that tuberculosis of the tonsils in children, when the lung is already affected, can only rarely be demonstrated, and primary tonsillar tuberculosis is not of any more frequent

occurrence. The bronchial glands are often affected. This causes a bronchial breathing over the second, third, and fourth costosternal articulations. If the mediastinal glands are affected there may be cough similar to that of whooping-cough.

From the ninth to the fourteenth year, in addition to the swelling of the glands, scrofula produces chronic inflammatory changes in the ears and nose, and also in the gums and teeth; from the third to the eighth year eczema of the face, and conjunctivitis are also common. In contradistinction to these symptoms, during the first four years of life the manifestations of scrofula are almost exclusively those in which the presence of the tubercle bacillus can be found; scrofuloderma, tuberculosis of the bones and joints, meningitis, and tuberculosis of the lungs and abdominal organs. In thirty-six per cent. of the cases of scrofula the parents of the child have symptoms of tuberculosis.

At the session of the Union for Internal Medicine, held May 31st, Litten read a paper on *endocarditis traumatica*. He excluded from consideration under this title all instances of tearing or bruising of the valves in cases in which endocarditis is already present, as this may occur, even resulting in death, without there being any trauma. Neither does the term include those cases in which an accident causes a fully compensating heart in which a lesion is present to become uncompensating, nor those instances, of which many have been recorded, in which, after an injury, germs enter the blood, and fasten themselves upon a valve. These are cases of septic endocarditis resulting from general infection. There are left cases of simple, benign verrucose endocarditis, which have followed so directly upon the receipt of an injury that they undoubtedly are to be regarded as its direct result. Such a case is the following: A healthy young man was crushed by a horse against the side of a stall. As a result he developed pain, anxiety, palpitation, chilliness, fever, dyspnea, and cyanosis. Some months later signs of mitral insufficiency and endoarteritis developed, which ordinarily lead to aortic stenosis. In only one case of this kind had Litten seen the traumatic endocarditis result in recovery; all the others became chronic.

In the discussion of this paper, on June 21st, Führbringer stated, (1) That all affections of the heart may be rendered much worse as a result of trauma; (2) that even in healthy persons a temporary severe disturbance of function may result (acute dilatation); (3) that injury of the cardiac muscle may be followed by myocarditis; and (4) that valvular incompetence may follow tearing of a valve.

The writer thought it had not been proved that true inflammatory endocarditis could follow traumatism. Stenosis of a valvular orifice might of course result from the cicatrix due to a rent, but this is quite different from stenosis resulting from specific inflammation.

Von Leyden mentioned the case of a boy twelve years of age, who was thrown down and struck upon his breast by a school-teacher. A fever developed and six weeks later the boy died. Suppurative peri- and endocarditis, with calcification were found, the valves being involved.

In such a case it is difficult not to recognize the relation of cause and effect between the accident and the disease.

Litten said that the occurrence of typical endocarditis with papillary excrescences in these cases had been so thoroughly proved by autopsies that its existence can hardly be doubted. The traumatic breaks in the endocardium presumably furnish the means of entrance for the germs which are circulating in the blood, and in them and in the extravasations the germs find a suitable soil for growth.

Boas reviewed from an etiologic point of view *sixty-two cases of cancer of the alimentary tract*, which he had seen. In only three instances was there a history of cancer in the parents of a patient, and only seven times in the person of some other near relative. Heredity, then, possesses but little significance as a point of diagnosis. Quite the reverse is true of trauma. From the records of his polyclinic his assistant had been able to collect thirty-four cases of carcinoma of the alimentary tract possessing a traumatic history. In six of these the cancer was of the stomach. From four years to two months elapsed before the patients complained of symptoms. This fact raises the question as to the length of time which a cancer may exist before symptoms manifest themselves. Boas said that he agreed with those authors who associate a slow growth with a longer latent period. Traumatism under such circumstances may stimulate the sluggish cells of a slow-growing tumor to greater activity. The younger the individual, the more certain the relation between trauma and tumor.

SOCIETY PROCEEDINGS.

THE BRITISH MEDICAL ASSOCIATION.

Sixty-fifth Annual Meeting, Held at Montreal, August 31 to September 3, 1897.

[Special Report to THE MEDICAL NEWS.]

GENERAL SESSION.

THIRD DAY—SEPTEMBER 2D.

THIS session was devoted to the Address in Surgery by MR. W. MITCHELL BANKS of Liverpool. His subject, "The Surgeon of Old in War," proved one of the most interesting of the entire meeting, both from a historic and heroic standpoint. At its conclusion, Sir William Huntington moved a vote of thanks to Mr. Banks for the pleasure his address had given them, which was seconded by Dr. W. W. Keen of Philadelphia, and carried by acclamation.

The other events of the day were the luncheon upon the "Mountain" in a beautiful open pavilion commanding a superb view of the entire city and the majestic St. Lawrence for nearly thirty miles. This was given to about 250 of the English members and noted guests by the Mayor of Montreal, and was followed by brief speeches by Lord Lister, Lord Mount Royal, Mr. Wheelhouse, Dr. La Marche, and others.

In the later afternoon, the foundation-stone of the Nurses' Home of the Montreal General Hospital was laid by Lord Lister. Short speeches were made by Lords

Aberdeen and Mount Royal, and by the Mayor and Dr. Roddick.

At night was held the most impressive and ponderous social event of the whole meeting—the Annual Dinner. The huge dining-hall was beautifully draped with flags and the crests of the different provinces of the British Empire, and tables were laid for 600 guests. The good old, time-honored toasts of “The Queen,” “The Houses of Parliament,” “The Army and Navy,” were responded to by a long (and appalling) array of speakers, chief among whom were Lords Aberdeen, Lister, and Mount Royal, Professor Michael Foster, Dr. W. W. Keen, Sir Walter Foster, Sir Wm. Van Horn, the Mayor of Montreal, the Mayor of Toronto, etc. The event of the evening was one not down on the program, the presentation of an address to Lord Lister by Dalhousie University, Halifax, N. S. This address, coming literally from the very ends of the earth, and the extraordinary outburst of enthusiasm which it evoked, the whole company, grave and reverend seigneurs as most of them were, leaping to their feet and waving their napkins in the air and cheering “three times three” again and again, completely overcame the grand old man. He wept like a child, and it was some minutes before he could control his voice sufficiently to express his thanks for both honors, which he did in a few simple but exquisitely chosen words.

During the afternoon, an international golf match and tea were given by the Royal Montreal Golf Club, on their beautiful grounds near Lake St. Louis, which were courteously placed at the disposal of members and guests of the Association during their entire stay.

FOURTH DAY—SEPTEMBER 3D.

The paper of the afternoon was the Address in Public Medicine by DR. HERMAN M. BIGGS of New York. (See page 321.) It was heard with great interest, and at its conclusion a vote of thanks to the distinguished author was moved by Dr. Montizambert of Montreal and seconded by Dr. Harvey Littlejohn of Edinburgh.

The President of the Council, Dr. SAUNDBY, then moved that “this meeting recommends his Excellency, the Earl of Aberdeen, K.C.G., C.M.G., and Lord Strathcona and Mount Royal for election as honorary members of the British Medical Association.” This was seconded by the Treasurer, Dr. Parsons, and carried unanimously. The President, Dr. Roddick, moved the endorsement by the Association of the extension of a system of District Nursing throughout the Provinces of the Dominion, which was seconded by Dr. Barnes and carried.

An invitation was presented on behalf of the American Public Health Association by the Chairman, Dr. Benjamin Lee of Philadelphia, to attend its Twenty-fifth anniversary in Philadelphia October 26th, which was received with thanks, and ordered published in the journal of the Association.

The meeting then adjourned with the usual vote of thanks to the President.

The other events of the day were garden-parties, a second excursion down the Lachine Rapids, and a game

of lacrosse between the St. Regis Indians and the Montreal Club in the afternoon.

In the evening a reception was given in the beautifully lighted grounds and buildings of the McGill University by the Faculty, the chief feature of which was the unrolling of a mummy (presented to the museum by Dr. Roddick) by Professor Macalister of Cambridge, who interpreted the inscriptions upon the bandages as they were unwound, in an appallingly edifying manner.

SECTION IN GENERAL MEDICINE.

SECOND DAY—SEPTEMBER 2D.

THE DIETETIC TREATMENT OF DIABETES

was the subject for discussion and was opened by DR. ROBERT SAUNDBY of Birmingham, England. The usual diabetic diet, he said, with its rigid restrictions, can only be carried out by the doctor's authority and the patient's docility. Compromise is the rule, but it is arrived at by the doctor's opinion being sacrificed to the exigencies of the patient. Diabetes mellitus is a clinical group, of which the cases and proper classification are debatable, and on that account variations prevail on views of treatment.

Glycosuria is an abnormal phenomenon, and occurs when the amount of carbohydrates ingested exceeds the utilizing capacity of the body. This capacity varies in different individuals and perhaps in the same person at different times. Those who become easily glycosuric from slight excess stand in close relationship to the milder form of diabetes. In severe cases of diabetes, glycosuria persists even on flesh diet, a fact explained by the formation of carbohydrate molecules when albumen is converted into urea. Hence, in severe diabetes, there is no physiologic reason for persisting with strict diet in the hope of thereby removing the glycosuria.

We must look to clinical results in the hope of justifying our treatment and must not be led too far by our prepossessions in favor of any disputed pathologic doctrine. Instead of following blind routine, we should give each patient as great a quantity of carbohydrates as experience shows can be assimilated. The following daily allowance will be suitable in an average case: Milk, 1½ pints; baked potatoes, 6 ounces; levulose, 1½ ounces, and in mild cases, 4½ ounces of dry toast. Fat bacon may be allowed at one meal, if tolerated, but diabetics absorb fat badly. Alcohol, in the absence of albuminuria, may be allowed in quantities up to 4 ounces, especially if taken with dilute mineral acids. It is of great importance to prescribe definite quantities, and to test the effect of the diet by weekly body weighing, measurement of the urine, and estimation of the sugar, the first of these being the most important.

DR. SIDNEY COUPLAND of London, England, concurred in the view that no hard and fast lines can be drawn in the employment of a restricted diet; indeed, he has often found that the attempt to enforce the use of an exclusive nitrogenous diet has resulted disastrously to the patient, diabetic coma frequently supervening, especially in cases in which there is a tendency to mental deterioration.

DR. R. SHINGLETON SMITH of Bristol, England, thought that while dietetic latitude might be allowed aged

diabetic patients, in the case of the young a more or less rigid exclusion of carbohydrates must be insisted upon.

DR. EBENEZER DUNCAN of Glasgow pointed out that the percentage of sugar in the urine is not the sole criterion of the progress of the disease, nor the elimination of sugar from the urine the only consideration. Cases due to disease of the pancreas are not affected by dietetic treatment, while those of a neurotic type are positively benefited by a restricted and non-saccharine diet.

DR. JAMES TYSON of Philadelphia said that in mild cases the glycosuria is controlled and even cured by dietetic treatment. Glycosuria to the extent of two per cent. must be treated by restricted diet or it will invariably run into diabetes mellitus. For two days during each month, he is in the habit of testing the effect of an exclusively proteid diet in his milder cases, and alternating this test, he has experimented with the effect of carbohydrates, also once a month. The polyuria in diabetes he believes to be the result of the glycosuria. A purely proteid diet increases diacetic acid in the urine, and the possible accumulation of this toxin in the blood must not be lost sight of in pursuing a rigid proteid form of diet.

DR. A. JACOBI of New York said that the age of the patient is an all-important factor in the treatment of the disease. Carbohydrates should, as far as possible, be withheld from children, whereas the old may be allowed more latitude of diet, and if emaciating, must of necessity be allowed carbohydrates. He strongly advocated the use of milk, not as an exclusive diet, but as a most beneficial article of diet in diabetics of every age and type. He has not found any benefit to result from the use of skimmed over other forms of milk.

DR. LINDSAY of Belfast, Ireland, has found all treatment futile to save life in case of the young. Life may be prolonged for a few years and the disease palliated but not cured.

DR. SAUNDBY, in closing the discussion, wished it understood that he did not advise latitude in the dietetic treatment of disease only in so far as such latitude is guided by the results of experiment. Individual and not routine treatment should be employed in every case.

DR. EBENEZER DUNCAN of Glasgow then read a paper, entitled

THE TREATMENT OF DIABETES BY URANIUM NITRATE.

He said that Dr. West's paper, read before the Association in 1895, had revived interest in this form of treatment. Dr. Duncan believes that the cause of partial failure in the use of this remedy in diabetes is due largely to the insufficiency of the doses commonly administered. To obtain the best results 12 to 15 grains of the drug must be taken three times a day, preferably after meals. The possibility of exciting gastritis and nephritis, however, must be guarded against. He has found 15-grain doses quite safe. Since April last he has been testing the remedy carefully at the Glasgow Royal Infirmary, and in only one out of six cases—an advanced and hopeless one—had he found it disappointing. These six cases included persons varying in age from early manhood to old age. He has found also that the withdrawal of the drug at too

early a stage has been immediately followed by a return of all the diabetic conditions. With the one exception noted, all the patients under treatment are at the present time free from the presence of any sugar whatever in the urine, and a corresponding improvement in the general health has followed. He believes the cause of the diminution and elimination of sugar from the urine by means of this agent is due to its stimulating effect on the sugar-consuming cells, and not, as West claimed, dependent upon its power of consuming and digesting large quantities of starch.

DR. TYSON said that he had tried the treatment of diabetes with uranium nitrate twenty years ago, but abandoned it. After reading Dr. West's paper recommending larger doses, he resumed its use, and although he did not reach the large doses of from 8 to 10 grains, he could not obtain results from its use that warranted him in continuing it. One untoward effect which he had met with was a persistent diarrhea.

DR. DUNCAN, in replying stated that it will be found upon careful observation that the diarrhea complained of was due not to the uranium salt, but to over-feeding. He did not claim the drug to be a specific, but in his hands it was certainly at present proving a most promising remedial agent in diabetes.

DR. J. E. GRAHAM of Toronto read a paper on, and presented a case of

CROSSED HEMIPLEGIA, THE RESULT OF INJURY TO THE PONS VAROLII.

The accident occurred when the boy was eighteen months of age, and consisted of a penetrating wound of the left side of the soft palate from a splinter. The injury was followed by traumatic convulsions. He is now fifteen years of age, and is still subject to convulsions at varying intervals. There is hemiplegia of the side opposite to the injury, the paralysis being less marked in the lower than in the upper extremity. The face is drawn to the left side. The patellar reflex is exaggerated. Convulsions are general. Intelligence fair, but slightly impaired. Speech is drawling, swallowing of solids difficult. There is general atrophy of all the muscles of the right side, and ankylosis of the right elbow and wrist.

DR. ANGELL of Rochester, N. Y., cited a case of tumor of the pons varolii in which there was no diminution of the reaction of degeneration, indicating that the lesion was about rather than within the pons. He advocated operative treatment in Dr. Graham's case for the relief of the fixed flexion of the elbow and wrist.

THE BACTERIOLOGY OF PERTUSSIS

was the subject of a paper by DR. HENRY KOPLIK of New York. He employed hydrocele fluid as a culture medium in his experiments on account of the impossibility of generating the disease in animals. The small white pellets of mucus coughed up during the early stage of pertussis, he found to contain in their meshes an organism capable of isolation, and in his opinion this is the specific germ of the disease. He succeeded in obtaining excellent cultures in thirteen out of sixteen cases in which the experiment was carried out. The organism is very

similar in appearance to the bacillus of diphtheria, although but half its length. He has not yet completed his investigations of this subject.

DR. J. H. MUSSER of Philadelphia then read a paper, entitled

DISAPPEARANCE OF (PRESUMABLY ORGANIC) CARDIAC MURMURS

in the course of which he stated that mitral regurgitation disappears more rarely than any other murmur. Many so-called organic murmurs are undoubtedly choreaic and functional in character, and hence their disappearance can readily be accounted for. Many organic murmurs vanish on account of ensuing cardiac dilatation. Such dilatation has been found *post-mortem* to so effect the auriculo-ventricular orifice as to render the ventricular cavity continuous with the cavity of the auricle. Some cardiac sounds disappear or are modified in consequence of increasing calcareous deposits upon the margin of the valves. The subject, he said, requires further study and investigation.

DR. JAMES T. WHITTAKER of Cincinnati read a strong plea in justification of the continued use of

TUBERCULIN (KOCH'S) IN THE TREATMENT OF PHTHISIS.

He has used it in the Cincinnati Hospital during six years in more than 1000 cases, and has yet to experience one serious result from its employment. If on no other ground than for the diagnostic value of the reaction which it invariably gives in phthisis its use is warranted. He cited a supposed case of carcinoma under the left sternocleidomastoid muscle which was operated upon, and a *post-mortem* examination revealed that the growth was tubercle. He had obtained, in the majority of cases, beneficial and even curative results from its use. As soon as tolerance of the serum begins to manifest itself, it should be withheld, and resumed when that tolerance is lost. It requires years in some cases to obtain its full remedial results. He had recently discharged a patient as cured who had been under the tuberculin treatment for two years.

DR. TYSON said that he has experienced great difficulty in persuading patients to submit to the long-continued daily hypodermic injections.

DR. GRAHAM cited a case in which Dr. Trudeau obtained the reaction and confirmed the diagnosis of phthisis when all the usual symptoms were absent.

SECTION IN SURGERY.

SECOND DAY—SEPTEMBER 2D.

DR. JAMES BELL of Montreal read a paper upon
THE OPERATIVE TREATMENT OF CANCER OF THE RECTUM.

This is a subject of great promise, but it finds scant mention as yet in surgical text-books. Nevertheless, the removal of any portion of the rectum is now a feasible surgical operation by the sacral route. An early, thorough removal of cancer of the rectum enables one to give as favorable a prognosis as a similar operation in the breast. Glands in the mesocolon are often palpable when no can-

cer of the rectum exists, so the presence of these glands is not necessarily a contra-indication to operation.

In a large majority of cases of high cancer of the rectum, the symptoms are slight or wholly absent, and early diagnosis is therefore difficult. Electric lighting and inspection of the rectum offers the surest means of diagnosis.

Cancer of the rectum has been removed by the abdominal route, and the two cut ends of the bowel approximated with success; but this is possible in very few cases, and the same is true of the vaginal method. The majority of these tumors should be attacked, therefore, by the sacral method. Omitting the technic of the operation, although the reader said he preferred Heinecke's incision, some practical points were discussed.

1. Previous colostomy is desirable, both to complete the diagnosis, to keep feces for some days away from the rectal wound, and to make a permanent outlet for feces if at operation it should be found necessary to leave an open wound.

2. There are three essentials necessary to the operation itself—absolute cleanliness of the wound, freedom from tension of the cut edges of the bowel, and a perfect suture. The fear of stripping off too much of the mesocolon is an exaggerated one; there is little danger of sloughing if tension is avoided.

3. There should be no hurry in closing the colostomy-wound, as it is better to wait some weeks or months even, until the danger of recurrence has somewhat passed.

Statistics are unreliable as showing the exact percentage of cures, but it is safe to predict that further experience in technic, and especially an earlier diagnosis and operation, will give a higher percentage of recoveries than has yet been obtained.

MR. C. B. BALL of Dublin then read a paper, entitled

TRANS-SACRAL RESECTION OF THE RECTUM.

He opposed the idea that sepsis in these cases in many instances is unavoidable. The perineal route should be abandoned for all cases except those rare ones involving the anus alone. Even if successful, the perineal operation leaves the patient in a miserable state of incontinence. The motility of the tumor in the pelvis is the best indication that the growth may be removed with a fair chance of non-recurrence. Even if recurrence is to be looked for, the removal of the growth admits of a more favorable prognosis, both as to the comfort and length of life, than permanent colostomy.

The maintenance of the pelvic diaphragm (levator and sphincter ani muscles) is most important, and can only be preserved by the sacral operation, with injury to the muscles only in the center of the diaphragm, thus avoiding the nerves which supply these muscles. With a pruning-shears, after the sacrum has been exposed, a cut is made to the right and left of the coccyx and lower part of the sacrum, and then one cut is made across it, a triangular portion being removed. This is more simple and far better than the osteoplastic operations. If the preliminary preparation of the patient has been good and the wound sufficiently flushed, drainage may be dispensed with. Sloughing can usually be avoided by taking the greatest

care in handling the gut, and by snipping lateral attachments as far away from the gut as possible. The essayist's record is 17 cases, with 1 death from operation, a case in which the bowel was completely occluded and could not be thoroughly cleansed. Preliminary colostomy is wholly unnecessary.

DR. W. W. KEEN of Philadelphia called attention to the fact that now no part of the alimentary canal is out of the reach of the surgeon, excepting a portion of the esophagus. The mortality of Kraske's operation (in 115 cases, in his own hands) was 34.5 per cent. : during the last few years it has been less than 9.8 per cent. As to recurrence, taking a limit of four years as a safe guarantee, 15.7 per cent. of his patients have passed this limit, while many of the others have a much lengthened and benefited existence. Other surgeons have had as high as 20 per cent. of permanent recoveries. He believes in a preliminary colostomy, performed one, two or, better, three weeks before the resection of the bowel. Kraske advocates this only in the case of patients with obstruction, but it has an object not only to unload the bowel, but to avoid sepsis, especially in those cases in which it is found impossible to unite the cut ends of the bowel. Moreover, an inguinal colostomy wound is vastly preferable to a sacral anus, without sphincteric action.

The speaker said that a preliminary emptying of the bowel during four or five days is insufficient. He had known of mild purgatives and injections being given during a period of seventeen days without producing complete evacuation of the colon. The presence of indican in the urine will show whether fecal matter is still in the bowel.

The object of osteoplastic resection is to restore the integrity of the bone. This is to be accomplished only by the most perfect asepsis, for there is a surgically produced compound fracture of the sacrum. In women, child-bearing is not interfered with, and men can ride bicycles after the removal of the sacrum, and the speaker therefore advocated the removal of a portion of this bone instead of the osteoplastic operation.

DR. JOHN ASHHURST of Philadelphia said that he had not been so enthusiastic over the operative treatment of this serious malady as the previous speaker, but what he has recently seen in Montreal hospitals, as well as heard during the proceedings of the section, have given him a more favorable view. He too, inclines toward preliminary colostomy. By posterior linear rectotomy, as recommended by some French surgeons, great relief can be afforded. This is naturally a mere palliative, but it is a simple procedure in non-operative cases.

DR. BALL, in reply, said that as he brings down and fixes outside the anus the upper cut end of the bowel, the necessity for colostomy is practically done away with. In resection of the bowel and suture of the cut ends, a preliminary colostomy is desirable.

MR. BERNARD ROTH of London presented an analysis of

ONE THOUSAND CONSECUTIVE CASES OF LATERAL CURVATURE OF THE SPINE TREATED BY POSTURE AND EXERCISE EXCLUSIVELY, WITHOUT MECHANICAL SUPPORT.

Almost exactly one-half of these patients suffered from muscular weakness. More than one-half of these (523) had simple curvature—the letter "C" deformity. If osseous deformity co-exists, a perfect cure is impossible. In "C" curvature osseous deformity is an exception, while in "S" deformity it exists in most of the cases. Pain is a most common symptom. Flatfoot of a severe type is found in about one-sixth of the cases, and of a moderate degree in nearly one-third, making almost one-half of all the cases in which treatment of the spine that of flat-foot is to be added.

Nearly every patient had received some previous treatment, either by massage, gymnastics, or spinal apparatus. All apparatus was at once abandoned. The usual duration of treatment was, by daily visits, for from two to three months. The results were as follows: Cured or much improved, 869; improved, 75; failures or partial failures, 56.

A large percentage of the cured patients, more than one-third, were confirmed by observation from six months to ten years later.

MR. R. T. MCKENZIE described

A NEW SCOLIOMETER,

consisting of a stand with vertical upright and movable pairs of calipers which can be clamped upon the hips and shoulders. Then with an ordinary drawing-frame a tracing of the spine and iliac crests, acromion processes, etc., is made, the tracing upon paper being one-fourth natural size. The patient is then made to bend forward, and tracings of the curve of the ribs are similarly made at various levels.

DR. V. P. GIBNEY of New York believes in, and carries out as far as possible in his practice, Roth's methods of treatment of lateral curvature, and therefore during the past ten years has obtained much better results than formerly. If all cases were thus treated before osseous deformity is established, permanent cures might always be obtained. It is difficult to persuade patients to come daily for three months for gymnastic exercises. In America there is far less pain in connection with lateral curvature than in England, although why this should be the case does not appear. A certain number of stupid patients do better if they wear for a time an appliance until they obtain some little practice in gymnastics and the spine becomes less rigid.

DR. SAMUEL KETCH of New York said that he anticipates the time when parents and teachers and general practitioners also will pay attention to curves in children's spines, and will bring the children for treatment during the early stages. The instrument-maker should be a maker of an instrument merely, and should not be allowed to fit the instrument.

DR. B. LEE of Philadelphia considers that the lumbar region is affected before the dorsal region, and that treatment during this early stage is particularly successful.

DR. G. A. PETERS of Toronto spoke of

GUNSHOT WOUNDS OF THE SPINAL CORD,

giving an able array of statistics of injuries of this nature, for the most part received in the Civil War of the United

States. He then described a case of gunshot wound of the ninth dorsal vertebra, with sudden and complete paralysis and anesthesia below the eleventh dorsal nerve. The wound healed without suppuration. The deep reflexes were permanently lost, but the superficial reflexes in great measure returned. The patient died about four months later.

DR. J. N. COUSINS of Southsea, Wales, spoke upon THE OPERATIVE TREATMENT OF STRICTURE OF THE URETHRA.

He has discarded cutting operations in almost all cases. The instrument he prefers is a catheter with a bulbous point, a solid, flexible distal portion, and a hollow, stiff proximal portion. These are made of various sizes, and in the course of three or four weeks the patient can accommodate the largest size. Many patients must be handled most carefully, but in only one case had the speaker found it necessary to suspend treatment entirely on account of chills and fever. If even a No. 5 instrument will not pass, the penis is distended with oil, and a small, absolutely flexible fine catheter (distal half a bougie) is passed. If it goes into a pocket it is left in, and a second and third, etc., is passed, until one enters the bladder. In very bad cases urethrotomy and perineal drainage is necessary.

SECTION IN OBSTETRICS AND GYNECOLOGY.

SECOND DAY—SEPTEMBER 2D.

DR. FRANKLIN H. MARTIN of Chicago contributed an address, entitled

A FURTHER REPORT ON THE TREATMENT OF FIBROIDS OF THE UTERUS BY VAGINAL LIGATURE OF THE BROAD LIGAMENT.

He stated that the operation was first proposed five years ago, its object being, first, to cut off the blood supply to the tumor, and, secondly, to alter the nerve supply of that organ. After describing the technic as practised by him at the present time, he enumerated the following points in favor of the operation: (1) From the standpoint of its mortality it is a minor operation. The patient can leave her bed at the end of a week; there is no shock attendant thereon; nor is there a protracted convalescence. If the method fails it can do no harm. (2) It does not destroy the family relation. Women can conceive after its performance. (3) It is applicable in desperate hemorrhagic cases in which a more radical operation cannot be performed at the time, and does not prevent resort to this if subsequently necessary. (4) It can be employed in cases in which such complications exist as to contraindicate a radical operation, as cardiac or other organic disease. (5) It may be employed in all cases in which the patient objects to the abdominal operation on account of the scar, or when she fears the shock of the greater operation. (6) It is of use in all cases in which the tumor is not of burdensome size and is associated with profuse bleeding. It is not applicable in pedunculated tumors of the submucous or subperitoneal variety.

DR. A. J. C. SKENE of Brooklyn remarked that hysterectomy for fibroid tumor is at the present time so successful

that few will consider any other method. In choosing the method of operation one should be guided by the age of the patient. He strongly objected to the removal of the sexual organs in young women. When the woman is near the menopause, however, he would prefer to perform hysterectomy. Statistics show that more women die after hysterectomy than from fibroids alone. In appropriate cases, his experience has agreed with that of Dr. Martin. He thinks the operation is impossible in the intraligamentous variety of tumor and very difficult in cases of multiple fibroids. The ligation of the artery is a difficult procedure. He emphasized the importance of a primary curettage of the uterine cavity. The diseased mucosa must be removed.

DR. MARTIN, in reply, stated that suppuration has never occurred in his experience after the operation, for the reason that he is careful in his technic.

The President of the Section, DR. WILLIAM JAPP SINCLAIR of Manchester, England, read an admirable address upon

INJURIES OF PARTURITION; THE OLD AND THE NEW,

in which he gave the history of the progress in obstetrics during the past two hundred years. He compared the methods of the Sixteenth Century, as practised by Chamberlain and Mauriceau, with the methods in vogue at the present time. Midwifery, he claimed, has become to-day too largely surgical, and the gynecology of to-day is largely required because of too frequent interference on the part of the obstetrician. Childbed morbidity is due mainly to the use of forceps. He quoted Collins' assertion that instruments should not be employed more than six times in 4000 cases. During the second period of the history of obstetrics, from the time of the introduction of anesthesia until the adoption of antiseptic methods, important advances were made. Emmet's operation and the work of Marion Sims in the cure of vesicovaginal fistulae belong here. The dangers of anesthesia are uterine inertia and the tendency to the too early use of forceps, with resultant perineal and vaginal laceration. The third period of anesthesia and antiseptic methods combined, began in 1870-73. The danger here is again due to too frequent and too early interference. The student of to-day learns surgery, which he never practises, and practises midwifery, which he never learns. During the last four years there has arisen a strong revulsion to the use of the forceps in Germany, and statistics show now that they are employed there only in about 1.03 per cent. of labor cases. In conclusion, he emphatically urged more careful instruction in obstetrics in the medical colleges.

The discussion on

THE VAGINAL *versus* THE ABDOMINAL ROUTE IN DEALING WITH INFLAMMATORY CONDITIONS AND TUMORS IN THE PELVIS

was introduced by DR. E. W. CUSHING of Boston. He stated that in making the selection of a route much depends upon the personal equation of the operator himself, and upon his medical training. He who sees every operation of this kind performed by the abdominal route will

adopt that method, while he whose experience lies entirely in the vaginal method will operate in that way. The mere item of the length of a man's finger may decide the point. It is difficult for a man to train himself in both methods, so that it becomes a matter of indifference as to which he adopts. In the vaginal operation, there are some advantages, such as the absence of cicatrices, so objectionable in the abdominal method, as well as the danger of hernia. There is also a difference in the amount of shock—there is much less in the vaginal operation on account of the less exposure and manipulation of the intestines. In truth, most of the shock of any operation is probably due to hemorrhage, and if this is prevented the amount of shock will not be noticeable. In vaginal hysterectomy, greater difficulty is experienced in avoiding the ureters, and the entire operation is more difficult than the abdominal procedure; it is easy to lose one's landmarks and to become confused. In the abdominal operation there is a greater certainty of diagnosis. It is much easier to work by sight and much easier to meet any complications that may arise. Weak or fat women are better operated on from below. The size and mobility of the uterus as well as the character of the discharges are general considerations to be studied. Abdominal hysterectomy is the rule for fibroid tumors in America. In France, morcellation is the rule because they are ignorant of our methods. Jacobs and Ségond, after visits to this country, are now performing the American operation. A small tumor, one not more than four or five inches in diameter, is most suitable for morcellation. In regard to malignant tumors of the uterus involving the fundus, the cervix should be sewed up and the enlarged uterus removed from above. Carcinoma of the cervix may be removed by the Clark operation, which is long and difficult, but the better method in the case of ordinary tumors is the operation from below. Inflammatory conditions of the pelvis can be removed by experts as well from below as from above.

DR. SKENE said that twenty years ago he suggested that pus in the ovaries and tubes might be readily reached through the vagina. The abdominal operation was the rule but now the best men are advocating the vagina as the most suitable route. In cases of smaller pus-sacs he opens from above rather than through the vagina. In case of small-sized uterine fibroids he prefers to leave the uterus alone or else adopt Martin's operation.

DR. JOHN CAMPBELL of Belfast said that the route ultimately adopted will depend largely upon the results of statistics, which as yet are to be compiled, and which present statements of the mortality and final results. The greater number of tumors are apparently removed by the abdominal route. In cases of limited inflammation, he prefers the abdominal route, but if the inflammatory condition is more diffused he operates through the vaginal vault, then, in case a large pus cavity is opened, it can be thoroughly drained, and in case of difficulty in entering the vaginal vault, a hysterectomy can be performed.

DR. H. T. HANKS of New York remarked that only star operators should attack certain inflammatory condi-

tions from below. The average gynecologic surgeon should not operate on a ruptured tubal pregnancy from below, nor should the vaginal operation be performed in cases in which there is a certainty of the presence of appendicitis.

DR. J. F. W. ROSS of Toronto stated that in Canada the patient does not trouble herself about the abdominal scar. As to hernia, it is not very common after the abdominal operation, and we are now beginning to hear of vaginal hernia, which is a much more serious condition than abdominal rupture. If it is proper to remove pus-tubes through the vagina it is just as proper to remove a fundal carcinoma that way. Want of space is a great defect in the vaginal route. Pus-tubes cannot be effectively removed from below, portions of the tube almost invariably being left. The removal of an organ not diseased in order to make a way of escape for pus is not admissible. In septic cases, with the patient very ill and when only a temporary opening is required, the vaginal opening is proper. It is impossible, as stated by Henriotin, to say just where an abscess is located before the operation.

DR. A. LAPHORN SMITH of Montreal stated that he was an out-and-out advocate of the abdominal method. With the Trendelenburg posture, the abdominal surgeon is the master of the situation. The majority of women with pus-tubes are sterile, and in these cases the vagina is too narrow to permit of a suitable operation.

DR. BERRY HART of Edinburgh believed that one should not be a partisan of either route, but that one should decide which is the best operation in any given case. In the majority of cases, the abdominal route is the best, but in certain instances the vaginal incision gives excellent results.

DR. A. F. CURRIER of New York believes that the advantage *par excellence* of the vaginal route is the thorough drainage to be secured thereby. He has seen decided shock after the vaginal operation.

The President, DR. SINCLAIR, stated that he has operated on ruptured tubal pregnancy through the vagina with success. The operation is practically extraperitoneal on account of the presence of adhesions.

At 12.15 the section adjourned to the Royal Victoria Hospital to view a demonstration by DR. HOWARD KELLY of Baltimore of an examination of the female bladder and ureters.

SECTION IN ANATOMY AND PHYSIOLOGY.

FIRST DAY—SEPTEMBER 1ST.

THE BEST METHODS OF TEACHING ANATOMY

was the subject chosen for discussion, and this was opened at considerable length by PROFESSOR ALEXANDER MACALISTER of Cambridge, England. He was followed by DR. SHEPHERD of Montreal and several other Canadian and American speakers. The general feeling of the meeting seemed to be decidedly in favor of lightening the anatomic burdens of the over-driven student by cutting out matter which was only of theoretic interest. The only speaker who dissented from this view

was PROFESSOR MICHAEL FOSTER, who was of the opinion that a man might be taught too much physiology, but could never be overloaded with anatomy. As regards the methods of teaching, there was more divergence of opinion, and different views were expressed as to the value and scope of demonstrations, lectures, examinations, etc., as methods of teaching, all, however, being agreed as to the fundamental importance of practical work in the dissecting-room. The discussion was prolonged until twelve o'clock, when the reading of papers commenced. These were of purely anatomic interest and evoked little discussion. During the course of the meeting, lantern demonstrations were given by PROFESSOR PRIMROSE of Toronto on the method of teaching by means of frozen sections, and by PROFESSOR W. H. THOMPSON of Belfast on the degenerations resulting from lesions of the sensory cortex. A beautiful series of microscopic specimens illustrating the histology of the parathyroid gland, which were sent by DR. D. A. WALSH of Edinburgh, were laid out in an adjoining room.

ANNOUNCEMENT.

THE AMERICAN PEDIATRIC SOCIETY.

THE American Pediatric Society is making a Collective Investigation of Infantile Scurvy as occurring in North America, and earnestly requests the cooperation of physicians, through their sending of reports of cases, whether these have already been published or not. No case will be used in such a way as to interfere with its subsequent publication by the observer. Blanks containing questions to be filled out will be furnished on application to any one of the committee. A final printed report of the investigation will be sent to those furnishing cases.

[Signed.]

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Committee.

THERAPEUTIC HINTS.

Benzoate of Soda in the Treatment of Grippe.—No drug has given more favorable results in the treatment of *grippe* than benzoate of soda. It may be given in capsule or powder form, the usual dose being ten grains three or four times a day. When muscular symptoms are pronounced, the following combination acts admirably:

℞ Sodii benzoas 3 ii
Salol 3 i
Phenacetin gr. xxxvi.

M., and ft. chart No. xii. Sig. One powder every four hours.

A Gargle for Sore Throat.—From 12 to 20 grains of ammonio-ferric-alum dissolved in eight ounces of water, and gargled at frequent intervals, will relieve ordinary cases of "sore throat" within a few hours.

Creasote Emulsion in Pulmonary Tuberculosis.—One of the best methods of administering creasote, especially in the case of children or those in whom the stomach is irritable, is in the form of an emulsion with cod liver oil, as follows:

℞ Creasoti (beech) m. xlviii-3 ii
Gum acaciæ gr. xlviii
Glycerini 3 ss
Ol. gaultheriæ m. x
Emuls. ol. morrhuae, q. s. ad. 3 vi.

M. Sig. Teaspoonful one hour after meals.

A Cough Mixture for Consumptives.—Although it seldom is justifiable to administer morphin in any form to allay the cough in pulmonary tuberculosis, during the last stage of the disease the following combination will be found to act admirably in procuring a cessation of the cough and inducing the sleep of which the patient so often is in need:

℞ Potassii cyanidi gr. iv
Morphiæ sulph. gr. iss
Spt. chloroformi } aa 3 iss
Tr. hyoscyami }
Syr. acaciæ 3 iv
Syr. simplicis, q. s. ad. 3 viii.

M. Sig. Teaspoonful every three hours.

An Excellent Diuretic Pill in cases of dropsy of cardiac origin is the following:

℞ Scillæ, pulv. }
Digitalis, pulv. } aa gr. xxx
Caffeinæ citratis }
Hydrarg. chlor. mitis gr. v.

M. et. ft. pil. No. xxx. Sig. One pill thrice daily, after meals.

For the First Stage of Bronchitis.—

℞ Potassii citratis 3 ss
Apomorphiæ hypochlor. gr. i
Syr. ipecac. 3 ss
Succ. limonis 3 ii
Syr. simplicis, q. s. ad. 3 iv.

M. Sig. Dessertspoonful in water every three hours.

For Acute Colic.—One of the best mixtures for the relief of that type of acute colic so frequently met with after indiscretion in diet, is prepared as follows:

℞ Chloroformi 3 iss
Tr. opii deodorat. 3 i
Camphoræ gr. xv
Ol. cajaputi 3 i
Aqueæ, q. s. ad. 3 ii.

M. Sig. Dessertspoonful every two or three hours.

For Atonic Dyspepsia.—An admirable tonic mixture for a patient recovering from atonic dyspepsia is the following:

℞ Strychniæ sulph. gr. ss
Acid. nitromuriatici 3 ss
Tr. gentianæ comp. } aa 3 ii
Tr. cardamomi comp. }

M. Sig. Dessertspoonful in water after meals.